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MEDICAL JURISPRUDENCE FORENSIC MEDICINE AND TOXICOLOGY

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FORENSIC MEDICINE.

BIOLOGICAL.

(*Continued.*)

THE MEDICO-LEGAL RELATIONS

OF

VISION AND AUDITION,

AND OF

INJURIES TO THE EYE AND EAR.

BY

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VISION AND AUDITION AND INJURIES TO THE EYE AND EAR.

CHAPTER I.

ON THE ACUTENESS OF VISION.

THE acuteness of vision of an eye-witness may have an important bearing upon the credibility of his testimony. It may have an important bearing on those cases of alleged direct or indirect injury to the visual apparatus, in which the simulating plaintiff is actuated by revengeful motives, or by a dishonest desire for pecuniary remuneration for his alleged hurt. It must be taken into consideration likewise in those cases of actual injury, direct or indirect, to the visual apparatus, in which justice would naturally side with the injured party, to the end that the degree of his incapacity may be correctly determined.

The visual apparatus comprises the eyeball together with its extrinsic muscles, the optic nerves, the chiasm, the optic tracts, and the centres of visual perception in the brain. Acuteness of vision depends upon the integrity of these structures. The eyeball is really a living camera. Upon its retina is projected an instantaneous and transient photograph of the objects seen. By virtue of the transmission of such impressions upon the retina to the centres of vision in the occipital lobes, by the optic nerves, the chiasm, the optic tracts, and the prolongations of the optic tracts, the retinal image of the object under observation is perceived. If the retinal images be true and if impressions of them be properly transmitted to a normal visual centre, the perceptions of the object will be correct, so far as concerns the visual apparatus. It often happens, however, that the retinal images are not clear and distinct; under certain conditions they do not represent the thing as it is. The reason for this must often be sought in the state of the refraction of the eye.

By refraction of the eye is signified "the influence of the

ocular media upon a cone or beam of light, whereby a normal or emmetropic eye produces a proper image of the object upon the retina."[1] The ocular media which cause such a deviation of a cone or a beam of light are the cornea, the aqueous humor, the crystalline lens, and the vitreous humor. They are spoken of as the "dioptric system" of the eye. These media together constitute a lens which, in the normal, emmetropic or ideal eye, cause parallel rays of light (*i.e.*, rays derived from infinitely distant objects) to unite at a focus in the retina.[2] "From near objects, the rays proceed in a diverging direction, and their point of union in the normal eye, consequently, lies behind the retina, and yet the organ is capable of perceiving near objects also accurately. It has, therefore, the further power of bringing divergent rays into union on the retina. Now this power of bringing at will rays of different direction into union on the retina is the power of accommodation of the eye. . . . The change consists in an alteration of the form of the lens; above all, its anterior surface becomes more convex and approaches the cornea."[3] This alteration in the form of the lens is brought about by contraction of the ciliary muscle by which the zone of Zinn, or the suspensory ligament of the lens, is relaxed, when, by virtue of its own elasticity, the lens becomes more refracting. The accommodation is all positive. If we paralyze the ciliary muscle with atropine, for example, we can then accurately measure the refraction of the eye; the dioptric system is then adjusted for its far point.

The emmetropic, or normal, eye is not often seen. Emmetropic eyes are eyes in which, when they are at rest, parallel rays of light, that is, rays of light proceeding from infinitely distant objects, are brought to a focus on the retina; and in which the power to adjust the eye for near objects remains sufficiently good to enable the eye to read type as small as Jaeger No. 1, at 22 centimetres distance, until the patient is forty or forty-five years old. Such an eye is endowed with normal refraction and accommodation. And, inasmuch as emmetropia is relatively uncommon, there are deviations from the normal refraction. The varieties of abnormal refraction, or ametropia, are hypermetropia, astigmatism, and myopia, and

[1] Gould's "Medical Dictionary."
[2] Donders: "Refraction and Accommodation," p. 8.
[3] *Ibid.*

various combinations of astigmatism with hypermetropia and myopia.

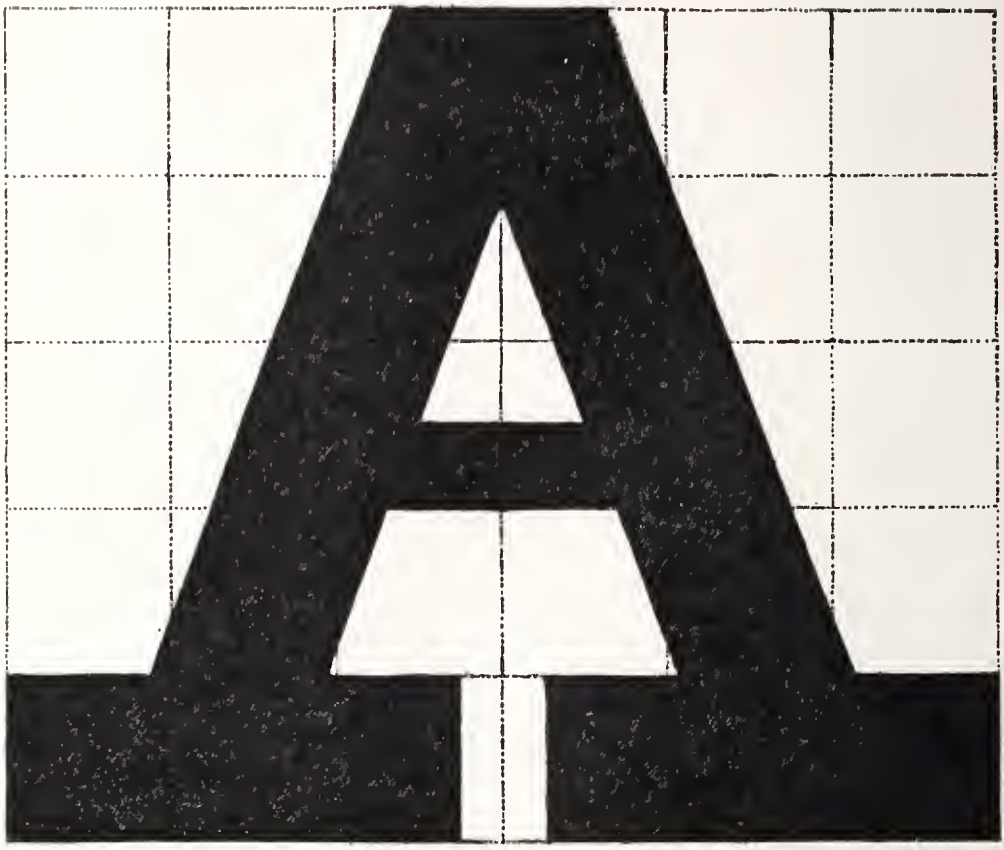
The greatest number of eyes are hypermetropic. The antero-posterior diameter of such eyes is shorter than that of emmetropic eyes. In technical terms, the "retina is situated between the dioptric system and the principal focus of the eye."[1] Very many eyes are astigmatic. By astigmatism we mean a "state of irregular refraction of an eye, usually congenital, in which the rays of light diverging from a single point cannot be brought to a focus at a point on the retina; an asymmetrical condition of the refraction of different meridians of the eye."[2] "Regular astigmatism is that error of refraction which is due to a difference in the focal distance of the two principal meridians, and depends mainly on the curvature of the cornea."[3] Simple hypermetropic astigmatism is that variety of astigmatism in which one of the meridians of the cornea is emmetropic and the other is hypermetropic in their effect upon the refraction of light. Simple myopic astigmatism is that variety of astigmatism in which one of the meridians of the cornea is emmetropic and the other myopic in their effect upon the refraction of light. Compound hypermetropic astigmatism is simple hypermetropic astigmatism plus hypermetropia. Compound myopic astigmatism is simple myopic astigmatism plus myopia. Mixed astigmatism is that variety of astigmatism in which one of the principal meridians of the cornea is hypermetropic and the other myopic in its effect upon the refraction of light. Astigmatism of these varieties is regular. It may be irregular. Irregular astigmatism may be normal or abnormal. "Normal irregular astigmatism is due to irregularity in the structure and density of the crystalline lens, so that an aberration of the rays occurs as they traverse the different sectors, in consequence of which there is an imperfect coincidence of the images of the different sectors. Its chief symptom is polyopia."[4] "Abnormal irregular astigmatism is due to some defect in the curvature of the cornea, or to some irregularity in the structure or position of the crystalline lens."[5] Astigmatism may be acquired, and then it is "dependent on flattening of the cornea from inflammatory

[1] Landolt: "Traité complet d'Ophthalmologie," iii., p. 126.
[2] Foster's "Encyclop. Med. Dic."
[3] *Ibid.*
[4] *Ibid.*
[5] *Ibid.*

SNELLEN'S TEST TYPES.

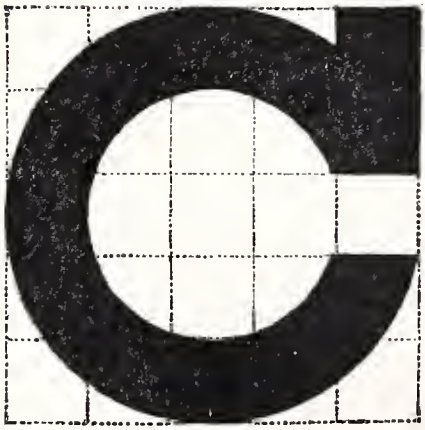
CC.

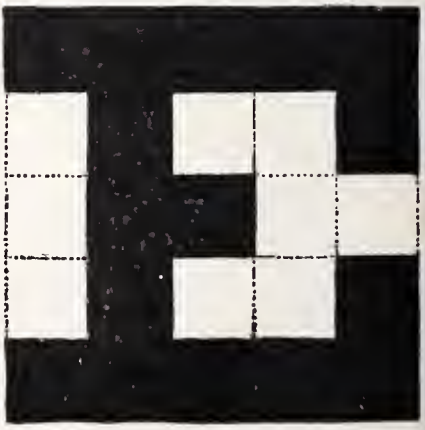
60 M.



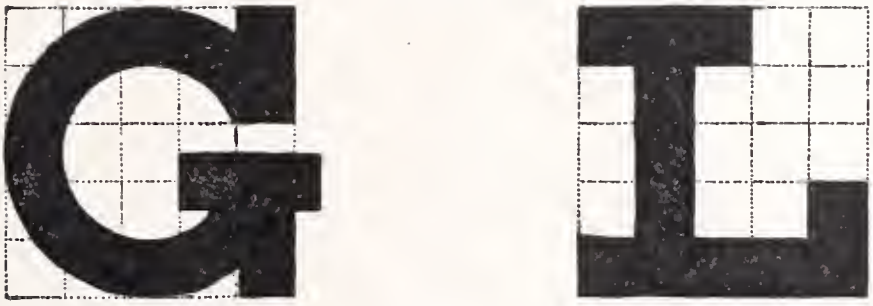
C.

30 M.

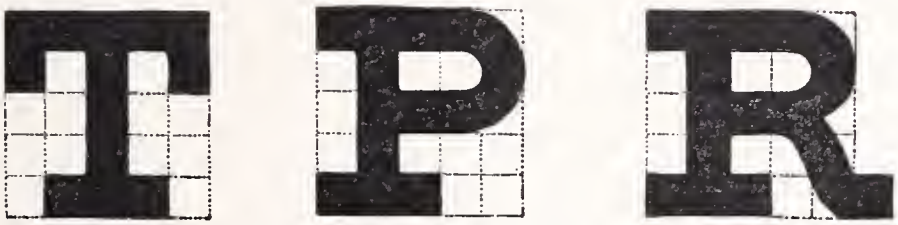




LXX.
20 M.



L.
15 M.



XL.
12 M.

XXX.
9 M.

XX.
6 M.

changes or irregular apposition of the flaps after a cataract extraction, or in dislocation of the crystalline lens." [1] Any wound, or other solution of continuity, of the cornea may cause astigmatism. Myopia, or "short sight," is that state of the refraction of the eye, in which, in the great majority of instances, the antero-posterior diameter is longer than in emmetropia. This is axial myopia. The most comprehensive definition of myopia is that state of refraction in which the retina lies beyond the focus of the dioptric system.[2]

The acuteness of vision of any eye is measured by testing the reading power of each eye separately. Charts of test types are used, and that devised by Snellen, based upon the deduction that the minimum visual angle is one minute, has been generally adopted by ophthalmologists. The chart is hung upon the wall in a good light—not direct sunlight—at 20 feet, or 6 metres from the patient. A screen is then placed before one eye, and, with both eyes open, the patient is directed to begin at the top and read as many letters upon the chart as he can.

If he is able to distinguish only the first letter, A, of the test types with either eye, the acuteness of vision of each eye is $\frac{20}{CC}$, or $\frac{6}{60}$ $\left(V = \frac{20}{CC}, \text{ or } \frac{6}{60}\right)$. If he can read the following two letters, but none below that line, then $V = \frac{20}{C}$, or $\frac{6}{30}$. That is to say, the patient at 20 feet can read only those letters of the test types which he should be able to read at 200 feet and 100 feet respectively, if his vision were normal. The numerator of the fraction always denotes the distance between the patient and the test types, and the denominator denotes the lowest line of type that he is able to read with each eye separately. The same fraction may stand for the acuteness of vision of both eyes; but frequently the vision of one eye is more acute than that of the other.

When $V = \frac{20}{XX}$, or $\frac{6}{6}$, it is normal; that is, the patient must be able to read at 20 feet letters analogous to those in the $\frac{20}{XX}$ line of the chart used in the test. A person having nor-

[1] Foster's "Encyclop. Med. Dic." [2] Landolt, *l.c.*, p. 118.

mal vision may read also the letters in the lowest line and even still smaller type; but vision is not normal unless in a good light one can read at 20 feet the letters in the $\frac{20}{XX}$ line at least.

When vision is not normal, the cause for it may be found in some failure of transparency of the refracting media, or in some morbid state of the cornea, aqueous, iris, crystalline lens, vitreous, ciliary bodies, retina, choroid, or optic discs. The ophthalmoscope will inform an experienced person whether one, or more, of those structures is in a morbid state. Vision is below normal also when the retro-bulbar portion of the optic nerves, the chiasm, the optic tracts, and the cerebral centres from which the nerve fibres composing the optic tracts are derived, are diseased or injured. The ophthalmoscope may not reveal anything denoting the condition of those deeply seated structures until some weeks or months have passed; in certain cases no morbid changes in the ophthalmoscopic image are ever observed.

When the visual apparatus is in a healthy condition, acuteness of vision depends upon the refraction of the eye. Emmetropic eyes have normal vision. Hypermetropic eyes may have normal vision, and they may not. In order that an hypermetropic eye may have normal vision, a contraction of the ciliary muscle must take place to increase the sphericity of the crystalline lens enough to compensate for the shortness of the antero-posterior diameter of the eyeball, by advancing the focus of the dioptric system until it lies in the retina. So long as the ciliary muscle is able to accomplish this fact, the hypermetropic eye will have normal vision.

Low degrees of regular hypermetropic astigmatism may be overcome by an analogous process; but, in general, the acuteness of vision in astigmatic eyes is below normal. Irregular astigmatism always reduces the acuteness of vision to a marked degree. Myopic eyes never have normal acuteness of vision (20 feet test).

Recognition of things by sight depends not only upon the size of the object, but also, to a certain extent, upon the observer's familiarity with the general aspect of the object, and upon the brilliancy of the object. It is well known that persons whose vision is imperfect are able to recognize things lying

beyond their range of distinct vision by virtue of their familiarity with the general characteristics of those things. A woman is thus distinguished from a man by her dress. And a near-sighted person will recognize an acquaintance by his walk, by some peculiarity of dress, or by some other mark of individuality, notwithstanding that the person's features are absolutely indistinguishable to the observer at such a distance.

Brilliant objects, such as stars, flames, polished surfaces, etc., are visible at much greater distances than other objects having the same size and form.

To ascertain whether failure in acuteness of vision be due to an error of refraction or not, ophthalmologists employ four methods:

1. Ophthalmoscopic examination. The ophthalmoscope will reveal the existence of morbid changes in the structures of the eyeball which take part in the visual act. It may be used to objectively determine the refraction of the dioptric system. The accommodation (ciliary muscle) of the patient must be paralyzed, and the accommodation of the observer relaxed, to make this method of observation reliable; and, even under such conditions, the error will amount to 0.50 or 0.75 of a diopter.

2. The fundus-reflex test, or retinoscopy. This is an objective method of determining the state of the refraction. Unless the patient's accommodation be paralyzed, the results of this examination are not to be relied upon, in many cases. The error, when the accommodation is paralyzed, will be 0.25 of a diopter at least, and it may be 0.75 D.

3. Javal's ophthalmometer is used to measure astigmatism objectively. It gives an approximately accurate idea of the curvature of the cornea, from which is derived a probable diagnosis of the amount and of the axis of the astigmatism. It is, in general, the more useful the greater the astigmatic error. But the ophthalmometer does not inform us whether the astigmatism is hypermetropic, or myopic, or mixed. It reveals irregular corneal astigmatism with great certainty.

4. The refraction is measured also by the subjective method. The patient is required to read with each eye separately the chart of test types as far as he is able. Then convex (+) spherical lenses are placed before the eye under examination, begin-

ning with a weak lens. The strongest convex lens through which the eye can read clearly the $\frac{20}{XX}$ line of types is the measure of its manifest hypermetropia. An emmetropic eye will reject + glasses. When hypermetropia is all latent, the eye may reject glasses. By paralyzing the ciliary muscle with atropine, the total hypermetropia will be revealed and may then be measured. An emmetropic eye, while under the influence of atropine, should read clearly the $\frac{20}{XX}$ line of types. Should the patient fail to read the normal line of types with the convex spherical lenses, convex cylindrical lenses should be tried; and the strongest convex cylinder through which he can read the normal line of types is the measure of his manifest hypermetropic astigmatism. Should neither the convex spherical nor the convex cylindrical lenses alone give him the proper acuteness of vision, combinations of them may do so; and the strongest combination of such lenses is the measure of the manifest compound hypermetropic astigmatism. These various errors may be absolutely measured by the same method, while the patient's accommodation is paralyzed by atropine.

Should the patient reject convex lenses of all varieties and strengths, the eye may be tested with concave (−) lenses; and the weakest concave lens with which the normal line is clearly read is the measure of the myopia. Concave cylinders should be tried, and the weakest of them that gives normal vision is the measure of the myopic astigmatism. Combinations of concave spherical with concave cylindrical lenses may be required to raise vision to normal, and the weakest combination is the measure of the compound myopic astigmatism. In myopia and myopic astigmatism, the accommodation may be in a state of spasm. This will exaggerate the error of refraction. To obviate this source of error, atropine should be used until the ciliary muscle is paralyzed.

The diagnosis of astigmatism is not completed, however, until the eye can see the test dial correctly at twenty feet. The test dial is a chart made like a clock-face with three parallel black lines running from each hour toward the centre. A clear space is left about the centre to avoid confusing the patient. The width of each line is such as to subtend a visual angle of one minute.

It is by no means always possible to raise the acuteness of

vision to normal with glasses, even though the visual apparatus be perfectly healthy. Very many hypermetropic, myopic, and astigmatic eyes fall into this category. Nevertheless a combination of the four methods of examination will reveal the state of the refraction of any eye. If the error of refraction be considerable, and the acuteness of vision be not raised to normal, or if it be not materially improved by correcting lenses, it is highly probable that the dulness of sight is a consequence of the error of refraction and nothing else. The burden of proof that it is due to something else should always rest upon those who entertain that proposition.

Having measured the acuteness of vision for distant objects, the power of the eye to see objects close at hand must be tested.

Jaeger No. 1.

A Fox being caught in a trap, was glad to compound for his neck by leaving his tail behind him; but upon coming abroad into the world, he began to be so sensible of the disgrace such a defect would bring upon him, that he almost wished he had died rather than come away without it. However, resolving to make the best of a bad matter, he called a meeting of the rest of the Foxes, and proposed that all should follow his example. "You have no notion," said he, "of the ease and comfort with which I now move about: I could never have believed it if I had not tried it myself; but really when one comes to reason upon it, a tail is such an ugly, inconvenient, unnecessary appendage, that the only wonder is that, as Foxes, we could have put up with it so long. I propose, therefore, my worthy brethren, that you all profit by the experience that I am most willing to afford you, and that all Foxes from this day forward cut off their tails." Upon this one of the oldest stepped forward, and said, "I rather think,

Jaeger No. 2.

my friend, that you would not have advised us to part with our tails, if there were any chance of recovering your own." A Man who had been bitten by a Dog was going about asking who could cure him. One that met him said, "Sir, if you would be cured, take a bit of bread and dip it in the blood of the wound, and give it to the dog that bit you." The man smiled, and said, "If I were to follow your advice, I should be bitten by all the dogs in the city." He who proclaims himself ready to buy up his enemies will never want a supply of them. A certain man had the good fortune to possess a Goose that laid him a Golden Egg every day. But dissatisfied with so slow an income, and thinking to seize the whole treasure at once, he killed the Goose, and cutting her open found her—just what any other goose

Snellen D = 0,5,

The Gallic tribes fell off, and sued for peace. Even the Batavians became weary of the hopeless contest, while fortune, after much capricious hovering, settled at last upon the Roman side. Had Civilis been successful, he would have been deified; but his misfortunes, at last, made him odious in spite of his heroism. But the Batavian was not a man to be crushed, nor had he lived so long in the Roman service to be outmatched in politics by the barbarous Germans. He was not to be sacrificed as a peace-offering to revengeful Rome. Watching from beyond the Rhine the progress of defection and the decay of national

Snellen D = 0,6.

enthusiasm, he determined to be beforehand with those who were now his enemies. He accepted the offer of negotiation from Cerialis. The Roman general was eager to grant a full pardon, and to re-enlist so brave a soldier in the service of the empire. A colloquy was agreed upon. The bridge across the Nahalia was broken asunder in the middle, and Cerialis and Civilis met upon the severed sides. The placid stream by which Roman enterprise had connected the waters of the Rhine with the lake of Flevo, flowed between the imperial

This power depends upon the state of the accommodation. A normal, emmetropic eye should be able to read fine print, Jaeger No. 1 or Snellen 1½, as near as 8 inches, or 22 centimeters, from the eye.

The error of refraction being corrected, nearly all hypermetropic and astigmatic eyes (irregular astigmatism excepted) will be able to do the same. Myopic eyes, in which the error is not excessive, will be able to read as well, either without or with correcting lenses. These statements will hold good until the patient has passed his fortieth year. All eyes then begin to experience the results of the change in accommodation power known as presbyopia, or "old sight." This is a normal physiological change, which makes it difficult, or impossible, for the patient to read fine type or to distinguish small objects at 8 inches, or 22 centimetres, from his eye. He holds his work farther from his eye, and places the lamp between his eye and the book or paper. But sometimes the ciliary muscle is strong enough and the lens is elastic enough to enable the patient to overcome the effects of this physiological alteration in his visual apparatus, even until he is forty-eight or fifty years old. His eye is presbyopic, nevertheless. Now and then such eyes suddenly lose their power to read newspaper type at any distance without the aid of convex lenses. In many cases, no very definite reason can be given for this *sudden* failure of the accommodation.

Presbyopia develops regularly in every eye. At forty-five years it amounts to S+1 D.; at fifty years it is S+2 D; at fifty-five years, S+3 D; at sixty years, S+4 D. In practice it is found that after sixty years the presbyopia does not increase with regularity.

The acuteness of vision for near work, therefore, undergoes a physiological modification. An emmetrope, for example, in order to see small print as well at fifty years of age as he did at forty, must use a spherical convex lens of 2 D. His presbyopia must be corrected. The same is true of those whose eyes are hypermetropic or astigmatic. The amount of the presbyopia must be added to the patient's distance glasses to give him the correcting glass for near work. Myopes may not experience any of the effects of presbyopia until later in life; because myopia compensates for equal amounts of presbyopia. A myope,

fifty years of age, wearing a spherical − 2 D. would read Jaeger No. 1 easily at 22 cm. without glasses. But at fifty-five years the same person would require S+1 D. to enable him to see as well.[1]

The extrinsic muscles of the eyeball play an important rôle in the visual act. The acuteness of binocular vision is diminished whenever these muscles are not sufficiently balanced to adjust both eyes properly for the object under observation. If the image of the object do not fall upon corresponding portions of the fundus of the two eyes, the object will not be seen clearly (contours blurred), or it will be seen double (diplopia). This condition is often more distressing to the patient than failure of vision due to an error of refraction. It is probable that the normal power of the internal recti is sufficient to overcome the effect of from 30 to 40 prism degrees; that the normal power of the external recti is about 8 prism degrees; that that of the superior and inferior recti ranges from 1 to 4 prism degrees.

When the external recti are relatively weak and the internal recti are strong, there is a tendency of the visual lines to meet before they should—esophoria; when the interni are weak and the externi relatively stronger than they should be, there is a tendency to divergence of the visual lines—exophoria. When a superior or an inferior rectus muscle is relatively weaker than its antagonist, there is developed a tendency of one visual line to rise above the other—hyperphoria, which may be either right or left, according to the case. These conditions are grouped under the term heterophoria. When the deviations are more marked; that is, when there is an obvious turning of the eye, we have, for those cases in which the eye turns in, the term esotropia (internal strabismus); for those in which the eye turns out, exotropia; for those in which the eye turns up, hypertropia; or in which it turns down, hypotropia. These conditions are designated as cases of heterotropia.

To measure heterophoria, prisms are used, by means of which lateral or vertical diplopia is produced at will by the observer. Having developed the diplopia, the amount of deviation of the images from the normal position is measured by the number of

[1] For those who cannot read, charts of numbers, or charts of peculiar figures, are used for the 20 feet test; and for near-testing the patient may be required to designate small dots, or to thread needles, etc.

prism degrees required to restore the images to a proper relation, one to another. Heterotropia may be measured in prism degrees also in a similar manner when it is possible to develop diplopia. It is not always possible to develop diplopia in these cases. When the heterotropia is due to recent paralysis of one of the extrinsic ocular muscles, diplopia is always present, if the vision of each eye is fairly good. The patient may learn to suppress the false image. A red glass placed before one of the eyes will enable the observer to distinguish the image projected upon that eye, so that the deviation of the lines of vision may be measured.

The subjective symptoms commonly associated with errors of refraction and heterophoria are indistinct vision, blurring of vision, pain in the eyes, pain in the orbit behind the eyes; frontal and temporal headache, which may be more marked on one side than the other; general headache; "sick" headache; "sun" headache; "blind" headache; occipital headache; pain in the back of the neck; confusion of mind; blind spells; and vertigo. Stevens and other writers have claimed that chorea and epilepsy are caused by errors of refraction and by heterophoria. It must be recollected that, at the time of testing the patient's eyes, vision may be normal, and the patient honestly unconscious that his eyes are the cause of his symptoms. Frequently it may be impossible to state positively that the symptoms are due to eye-strain. Then, in order to make a positive proof of the matter, the ocular errors must be corrected, and, if they have caused the disturbances, the symptoms will disappear after a few weeks or a few months.

Hypermetropia, and astigmatism not due to lesions of the cornea, are congenital. They do not change materially during life. Latent hypermetropia and latent astigmatism may become manifest and so give rise to the idea that the error of refraction has increased.[1]

Myopia is seldom congenital, but generally develops in early childhood. The development of it is favored by school work, and other severe usage of the eyes at short range, by the diseases of childhood, and by anything that undermines the bodily vigor.

[1] In a few cases that have come under the writer's observation it has seemed highly probable, if not certain, that an astigmatic error has actually increased.

All cases are more or less progressive; but the progress of the trouble in the majority of cases ceases spontaneously, or may be made to cease. Cases of myopia must be divided into two categories: the malignant and the non-malignant. Non-malignant myopia of low degree may be a positive advantage to one whose business calls for continuous use of the eyes at short range. Malignant myopia, on the contrary, is a condition involving great danger of ultimate blindness. The eye is not healthy; the myopia becomes more and more marked until it is excessive; the range of vision becomes progressively smaller. Injuries affect such eyes much more seriously than others. Even slight contusions may accelerate the increase of the myopia, or dislocate the lens, or cause hemorrhage into the vitreous, or precipitate a detachment of the retina.

The muscle of accommodation of one, or of both eyes may suffer from paresis or paralysis. The eye will then be adjusted for its far point. Both eyes will not work in harmony and the patient may be greatly annoyed by his condition. On testing such an eye it will be found that the power to adjust the eye for objects at varying distances is gone. The causes of this condition are as follows: Diphtheria, typhoid fever, articular rheumatism, syphilis, diabetes, parasitic diseases, poisoning by raw sausages and tainted meat, lesions of the central nervous system involving the nuclei or trunk of the third nerve, and vascular disturbances in the same region, digestive troubles, fracture of the skull, locomotor ataxia, anything that weakens bodily vigor, *e.g.*, essential anæmia, and anæmia developed by acute diseases, lactation, alcoholism, venereal excesses, masturbation, uterine lesions, abundant hemorrhages, etc., herpes zoster ophthalmicus, traumatisms of the eye or orbital region, sympathetic ophthalmia, glaucoma, and neuralgia of the dental branches of the fifth nerve, atropine and other mydriatics.[1]

[1] Landolt: "Refraction and Accommodation," translated by Culver, 1886, p. 551 *et seq.*

CHAPTER II.

SIMULATED BLINDNESS.

A PERSON may claim that he is partially or totally blind in one or in both eyes in consequence of some injury. If ophthalmoscopic evidence of a lesion in the visual apparatus sufficient to materially weaken or totally abolish the function of the eye or the eyes be found, the patient's statement regarding his ability to see may be accepted. But when no ophthalmoscopic evidence of a lesion is manifest, doubt of the truth of the patient's statement should be entertained.

By *amblyopia* is signified partial blindness, where there are no lesions demonstrable with the ophthalmoscope; by *amaurosis* is signified total blindness where there are no lesions demonstrable with the ophthalmoscope. In this connection, then, we have to deal with simulated amblyopia of one, or of both eyes; and simulated amaurosis of one, or of both eyes.

Monocular amblyopia or amaurosis is simulated most frequently. The problem that confronts the examiner in such cases is to prove that the malingerer actually uses the eye which he claims is amblyopic or amaurotic. The objective evidence bearing upon the question is as follows: The pupil of a healthy eye contracts in response to the stimulus of light; also when the eye accommodates, and during the act of convergence of the visual lines. It does not necessarily follow, however, that the existence of these reactions is proof positive that the eye is not affected. The converse proposition, however, is often true. The pupil of myopes is generally large (semi-dilated). The pupil is dilated when the light is faint, during and after great muscular exertion, and in real amaurosis.[1] Some persons can dilate or contract their pupils at will. In old age, in hypermetropia, in near vision and in strong light, the pupil is contracted. Observation of the tendency to fixation of the eye in monocular and in binocular vision will afford useful evidence regarding the function of the organ. Place a screen before the eye in question and in-

[1] *Vide* p. 27.

struct the patient to look at an object, which is caused to move toward and recede from the eye; if, when the screen is removed, the affected eye fixes the object, it is probable that the eye is a useful one. The same is true when a prism of 8 or 10 degrees base out is placed before the eye. If, under such conditions, the eye turn so as to overcome the action of the prism, while the sound eye fixes a given object, it is probable that the eye is a useful one.

One may cover the sound eye and attempt to surprise the patient by thrusting a finger toward the eye said to be affected. Should the patient wink or cringe, the eye is not blind.

The examiner may seem to devote his whole attention to the sound eye, determining its acuteness of vision, its refraction, and its range of accommodation. The patient's attention is thus diverted from the alleged amaurotic eye. He is then to read fine print; both with and without glasses. Finally, without exciting his suspicion, a strong convex glass (6 D.) is set before the sound eye, while the type is held at the usual distance for reading, *i.e.*, beyond the focus of the convex lens. If the patient still reads the type, he reads with the eye said to be affected.

Among the tests for detecting simulated monocular amblyopia and amaurosis are those in which prisms are used to produce double vision. If a prism be placed before one eye and the patient see two images, for example of a candle, he must have used both eyes. The experiment may be modified to confuse a person acquainted with the test. Thus, exclude the eye in question from vision, and place a prism over the sound eye so that the edge shall bisect the pupil. This will cause monocular diplopia. Then, without attracting the patient's attention, remove the screen from the other eye, at the same time moving the prism so as to cover the pupil of the sound eye completely. Should the patient still see double, he is using both eyes.

In some respects the stereoscope is one of the most useful agents employed in detecting simulated blindness. Prisms are an essential part of the construction of this instrument. The following from Kugel[1] indicates the method of its use:

"Vieusse gives the following method: Two wafers of different color, whose distance from one another is a centimetre, are

[1] "Ueber die Diagnose von Simulation der Amaurose und Amblyopie," Wiener med. Wochenschrift, 1889.

brought under the stereoscope. With this small distance of one from the other, the one lying on the *right* hand of the person examined appears on the *left* side and the other appears on the right side. Suppose there were a red wafer on the right and a blue wafer on the left, then the blue wafer will appear on the right side, and the red wafer on the left side. If, for example, we have to do with an individual who pretends left-sided amaurosis, the case can be of two sorts: either the person admits that he sees both the wafers; then the simulation is *eo ipso* proved; or, he admits that he sees only one wafer. In the latter case he would naturally confess to seeing the blue wafer, since this is on that side which corresponds to the professedly strong eye, viz., the right side, and he betrays himself thereby, so to speak, through a double lie. He denies the existence of the red wafer which he must see with the professedly strong-sided eye, but on the other side he professes to see the blue wafer which he can see only with the professedly amaurotic eye.

"In order to determine, by this method, even the degree of the sharpness of vision, I have with advantage employed two short words, as for example *herz-mein*. The pretender has either read *mein-herz*, or asserts that he sees only one of these words, the very one indeed which he could have seen only with the professedly bad eye."

Baudry[1] gives the following: "Our test is designed to determine the visual acuteness of the amblyopic eye or the one that is supposed to be so. We accomplish this with typographical characters disposed as will be stated. Let us suppose that upon each half of a card like those which are employed for stereoscopic tests one has commenced by tracing the same letters arranged identically in the same way and separated by perfectly equal intervals in the two tests, in such a manner that the latter shall be a faithful fac-simile one of the other without the least difference of stereoscopic parallels. Let us imagine, finally, that one suppresses upon each portion a certain number of letters or entire words taken by chance, or a combination of forms of letters, having care always that the suppressions made upon each of the lists shall not be reproduced upon the other. The place of the suppressed parts should be left blank. One may

[1] "Simulation de l'Amaurose et de l'Amblyopie, des principaux moyens de la devoiler," Bull. scient. du Department du Nord, Nos. 8, 9, 1882.

prepare in the same way ten cards of which the characters shall have progressively increasing dimensions calculated in a manner to represent ten numbers of the typographical decimal scale, so that they may be made to serve as a measure of the acuteness of vision in tenths. Several numbers may be grouped on the same card. These cards being placed in turn in the stereoscope, the simulator is invited to read the words or to pick out the letters which he sees, commencing with the last number—that corresponds to V=0.1. When he can read only the characters traced upon one of the halves of the card, the test will be ended, and the number of the last character which he shall have been able to read at one time upon the two halves of the card will measure the visual acuteness of the amblyopic eye. . . . It is convenient to have, moreover, a card both halves of which are perfectly identical and to make that the first test, in order that the person submitted to this mode of examination shall not suspect the trick which is used for the purpose of unmasking the fraud."

Another series of tests are based upon the principle of suppression of color by colored glasses. Kugel,[1] in his exhaustive article, writes as follows: "Snellen[2] gives the following very practical method. Red and green letters are viewed binocularly while the strong eye is furnished either with a red or with a green glass. As is well known, translucent[3] green letters are seen indistinctly through a red glass, while translucent[3] red letters are seen indistinctly through a green glass. If, now, in our case, both green and red letters are seen plainly, the person examined is caught.

"Let us take the case of left-sided amaurosis: then holding a red glass before the right eye, only the red letters are recognized. The reverse must be the case if a green glass be held before this eye. If both green and red letters are seen at the same time—a thing that can happen only by the help of the professedly amaurotic or amblyopic eye—the pretender is unmasked."

Bravais[4] gives the following test: "For cases where the prism test has failed, or the observer does not possess the double prism of Monoyer, and does not possess the scale of Snellen, or the tables of Stilling, the author suggests the following: Writ-

[1] *Loc. cit.*
[2] Zehender's Klin. Monatsch. für Augenheilkunde, 1877.
[3] Woodward.
[4] Bulletin et Memoires de la Soc. Française d'Ophthalmologie, 1883-84.

ing with a red pencil disappears when viewed through a red glass. Write a word in two colors, alternately red and blue letters, *e.g.*, the word *noir*. If the *o* and *r* are in red, the eye covered by a red glass will see only *ni*. If the patient read the word *noir* the eye covered by the dark glass is not blind. One may write two isolated words, one to be written in red, the other in blue. Or an entire phrase may be written in which certain words are in red, *e.g.*, *Je ne vois pas bien clair;* the words *ne*, *pas* and *clair* in red.

"One may have cards half blue and half red. It suffices to write with a black pencil upon the two colors. With the colored glasses the writing upon the blue ground is not read through the red glass and the writing upon the red ground is not read through the blue glass; as with the scales of Snellen, each eye sees only certain characters. With this card one can vary the tests; write words of different or of the same size, place them one above the other, or one to the right, the other to the left."

Michaud[1] gives the following: "It is known that marks with the red pencil traced upon a piece of white paper are not visible through a red glass. Therefore in the case of amaurosis or monocular amblyopia one places a red glass before the healthy eye. The patient ought not to see any of the characters. If the red characters are seen it will be by the alleged amaurotic eye. The patient, however, may be posted respecting the test and declare that he sees nothing. To eliminate as far as possible this chance of error we have recourse to the following artifice. It is sufficient to remove from letters of simple form one or two parts to change at once the aspect and value. For example, from the letter E it is easy to make I, F, or L. If then we trace upon paper an E of which the horizontal lines are red, and if we cause this letter to be seen with a red glass, the patient will not see an E but an I. Several letters thus modified in a word may compose a new word, and if one may admit that a badly seen E may be confounded with I or L, it is impossible to pretend that the word TETE could be taken for the word FILLE. In the same way the word MEOTANE, having no sense, could become VICINAL.

"Now, in reading the reader does not habitually look at each letter forming a word. It is the general appearance of the writ-

[1] Archiv. de Médecine et de Pharmacie Militaires, 1888.

ing which fixes in his mind the thought corresponding to the word. By suppressing such and such a word representing an idea a change may be made to another word representing another idea. Thus let us present to the simulator the word EPONGE made in red and black. After having put a red glass before the good eye, the alleged amaurotic eye which is uncovered will see the word EPONGE. The idea corresponding to this word is fixed in the mind of the patient, and it will be difficult for him to substitute for it the idea LION by the mental subtraction of that which is marked in red. The simulator, urged to read quickly in a loud voice without time for reflection, will surely read EPONGE. If the uncovered eye is really amaurotic, the red glass does its work of effacement for the healthy eye, all that traced in red disappears, and the patient reads the word LION as quickly as he reads EPONGE without the interposition of the red glass.

"To render more difficult for the simulator the mental subtraction of the red, one may employ other colors in tracing the parts of the letters so as to make them polychromatic. Yellow should be avoided, as it is difficult to see it at a certain distance, and the perception of it is annihilated by the red glass.

"Finally, if one wishes to disturb still more the simulator, one may, while placing the red glass before the good eye, place a glass strongly tinted in green before the suspected eye. If binocular vision is preserved, the word will be read in its entirety.

"It is not sufficient for the military surgeon to be able to affirm that an eye pretended amaurotic or strongly amblyopic is not so; it is necessary that he may be able to say whether the acuteness of vision of that eye is superior or inferior to $\frac{1}{4}$ for the right eye, and $\frac{1}{12}$ for the left eye. Nothing is easier than to give to the characters in color dimensions clearly defined and fit to serve for the determination of the acuteness of vision. We make use of a red glass, a green glass, and small tablets. Our red glass is rectangular in shape, 10×5 cm. We recommend a glass of an intense red and of demi-double quality as we find it at all glaziers'. Same dimensions and recommendations for the green glass. Our tablets have the dimensions of loto cards, which renders them easy to carry. The characters which we have adopted are those of the type of the scales of Snellen; they have among other advantages that of being easy

to trace with brush and water-color upon paper ruled in millimetres, *i.e.*, architect's paper. Take the paper of which the ruling is brownish-red in preference to that of which the ruling is in blue. Avoid tracing in pencil the contour of the letters, above all in the parts which ought to be tinted red. Do not make use of carmine, but of vermilion or cinnabar.

"We confine ourselves to characters of 2, 4, and 5 mm. in size, which are visible to the normal eye at 6.66 m., 13.33 m., and 16.66 m.; and consequently at 1.66 m., 3.33 m., and 4.16 m. by an eye of which the vision is reduced to $\frac{1}{4}$, and at 0.55 m., 1.11 m., and 1.38 m. by an eye of which the vision is reduced to $\frac{1}{12}$.

"For the illiterate we substitute for letters, points, marks, crosses, which may become themselves points, and horizontal or vertical marks; figures of playing cards, etc.

"We advise placing the tablets well in front of the light to avoid the chances of error which might come from the reflections and dulness given to the characters by the colored glasses employed. As an example of the results to which we may come by the use of glasses and colored characters we consider it of some interest to give the following observation: It was concerning a young soldier of our regiment who for three weeks declared to his immediate superiors that he did not see with his right eye. This man, endowed with a subtle intelligence, had taken care to prepare the way by saying in his company that he had dissimulated his infirmity at the *conseil de revision*, and since his enlistment, in order not to be exempted or invalidated. He wished to avoid marriage, and, moreover, he desired to satisfy his military obligations. But he had not counted on target practice, and in fact, to his great regret, he could not dissemble any longer.

"This good apostle, to whom nothing was wanting, not even a contusion of the superciliary arch from the kick of a horse, was submitted to an examination. We proceeded to our examination with the aid of M. Maupetit, surgeon-major.

"Nothing was found with the ophthalmoscope—the fundus was normal.

"Our man could read well with the left eye, but with the right eye he did not distinguish the A from Z, whatever the size of the letters.

"We place a red glass before his left eye, leaving the other uncovered, and the reading of the black characters is quite easy. Nothing surprising thus far. But behold, when we substitute colored characters for black characters, the vision is declared abolished for both eyes! The presentation of colored letters had aroused the suspicion of our man, his strange reply aroused ours. The idea occurred to us to let him understand that this was not really extraordinary and that it could be dependent upon trouble with the sight of the right eye (the eye said to be amaurotic). We cover that eye with the palm of the hand, and the left eye recovers its function! The colored characters are read through the red glass! We substitute a green glass for the palm of the hand placed before the right eye, at the same time a red glass is placed before the left eye; and we present another table. This table is read in detail as if nothing had been traced upon it in red. The fraud was thenceforth manifest.

"A final test showed us to what degree of skill our simulator pretended. We place a red glass before the eye declared good, we leave uncovered the eye declared amaurotic, and we present some lines of writing of a yellow color. The man sees nothing and cannot read. Arguing then as before that the vision may be affected by the trouble in the right eye, we cover the right eye and the reading goes freely. That was an irreparable disaster for the pretended sincerity of the simulator in question; for with the right eye covered, and the left eye concealed behind a red glass, he ought to see absolutely nothing (we have said above that red glasses prevent the perception of clear yellow). How then could he read? He did not read, he recited from memory what he had had time to learn before we had closed the right eye. Moreover, all that had been read had been read under conditions which enabled us to declare that his vision was normal."

Many other tests for the detection of simulated blindness have been devised. The reader is referred for a description of them to the writings of Kugel,[1] Baudry,[2] Bravais,[3] and Nieden.[4]

[1] "Ueber die Diagnose von Simulation der Amaurose und Amblyopie," Wiener med. Wochen., 1889.

[2] "Simulation de l'Amaurose et de l'Amblyopie," Paris, 1889.

[3] "Simulation de l'Amaurose unilateral par les Verres colorées de Snellen," Bull. et Mem. de la Soc. Franç. d'Ophthal., 1883–84.

[4] "Ueber die Simulation von Augenleiden und die Mittel ihrer Entdeckung," Wiesbaden, 1893.

Congenital amaurosis and congenital amblyopia are not uncommon. And amaurosis and amblyopia *ex anopsia* are not uncommon. The anatomical structure and the physiological function of such eyes are normal so far as we can discern, excepting that the vision is very much reduced. Strabismus, convergent or divergent, is often associated with such an amaurosis or amblyopia. A difference in the refraction of the eyes is, however, much more regularly found. As a rule, the refraction is hypermetropic, or an astigmatism of high degree is found, or a combination of the two exists. The difference in the refraction of the two eyes is such that the patient will use the one that gives him least strain (smaller error of refraction). Inasmuch as the condition is one of long-standing —from birth or early childhood—the patient has never enjoyed perfect binocular vision. Experience has taught him to see everything with one eye. But a person who has enjoyed clear binocular vision is very much disturbed for some weeks or months after losing one of his eyes. Appreciation of perspective is practically suspended for some time, and obliteration of so large a section of the field of binocular vision causes at first an awkwardness and a hesitation in the patient's movements, that is not observed in one whose eye has been amaurotic or amblyopic from birth or early childhood.

Monocular amaurosis or amblyopia may be innocently claimed by children, or even by older patients. Association with one who has some marked ocular abnormality may suggest to a child the existence of some trouble with one of its own eyes. Or, the statement that one of its eyes is blind will sometimes lead a child to insist positively and persistently that it is so. There is no difficulty in proving the truth in these cases. On the part of the patient there is no desire to deceive, and when it is proven to him that he sees with the eye supposed to be blind, the trouble is at an end. Why older subjects should experience this sort of amblyopia and amaurosis, it would be difficult to explain. I have never observed it in a patient more than twenty years of age.

True amblyopia and amaurosis may be due to traumatism, lightning stroke, local or general hemorrhages, toxic substances in the blood, uræmia, diabetes, hysteria, migraine, reflex action, and lesions in the brain and spinal cord.

Simulated amaurosis of both eyes will be detected only by watching the patient and by surprising him into some action that will reveal the fraud. General anæsthesia might be tried. While recovering from the anæsthetic, the patient would be off his guard and might then be entrapped.

Simulated amblyopia of both eyes might be detected by observing the variations in the vision from time to time, and always under similar conditions of light, etc. If the acuteness of vision do not vary, and if it be not possible to detect any evidence of simulation by watching the patient or by surprises, true amblyopia may exist.

AFFECTIONS OF THE EYE INTENTIONALLY PRODUCED.

Such ocular disturbances are especially common in those countries in which military service is compulsory. Conjunctivitis, keratitis, cataract and mydriasis are the affections commonly observed. In general, the right eye only is attacked.

A variety of things have been introduced into the eye to produce conjunctivitis, *e.g.*, cigar ashes, tobacco, snuff, the seed of various kinds of grain, pepper, spirit of wine, brandy, soap, common salt, blue vitriol, lunar caustic, plaster, cantharides, pus from purulent ophthalmia, pus from a suppurating lachrymal sac, etc. A great variety of foreign bodies have been inserted into the eye for similar purposes. Inflammation of the cornea sometimes complicates such attacks of conjunctivitis, and patients have occasionally resorted to rubbing the cornea with lunar caustic in order to inflame its tissues. Cataract has been intentionally produced by thrusting a needle or a knife blade through the cornea into the crystalline lens.

Foreign bodies in the conjunctiva may be buried in granulation tissue and escape detection. When they lie in the superior fornix, they are not easily found. They may lodge there for a long time without exciting more than a slight catarrh.

Artificially induced conjunctivitis is most intense, as a general rule, over the lower eyelid and lower portion of the bulbar conjunctiva. Croupous conjunctivitis is excited by caustic substances. An eroded spot will be found in the palpebral conjunctiva and a corresponding erosion on the opposing bulbar conjunctival surface. The course run by artificial conjunctivi-

tis differs from that of other varieties in that it is especially obstinate in yielding to treatment. After having brought about a considerable improvement in the eye's condition, at the next visit one may find that the disease has broken out afresh. More of the exciting cause had been introduced into the eye. In order to cure such cases and unmask the malingerer, absolute control over the patient is a necessity. When it is no longer possible for him to keep up the irritation, the inflammation may be caused to subside.

Solutions of atropine and ointment of belladonna are the preparations employed to cause mydriasis. The full effect of these preparations is maximum dilatation of the pupil and complete paralysis of the muscle of accommodation. From one to two weeks elapse after discontinuing the applications before the effects entirely disappear.

The differential diagnosis of mydriasis induced by a drug, from that due to trauma, glaucoma, or real amaurosis is established by virtue of the following: The pupil is more widely dilated; ruptures of the sphincter of the iris, which are present in cases of marked traumatic dilatation, are wanting; ophthalmoscopic evidence of glaucoma does not exist; the accommodation is paralyzed either partially or completely. Moreover, illumination of the sound eye causes consensual contraction of the pupil in an amaurotic eye; on the contrary, however, illumination of an amaurotic eye does not cause consensual contraction of the pupil of the sound eye; and illumination of an amblyopic eye causes slow and weak contraction of the pupil of its fellow. Slight inequality of the pupils without paralysis of the accommodation may be due to pathological changes in the brain or spinal cord, or to a difference in the refraction of the eyes.[1]

[1] Nieden: "Ueber die Simulation von Augenleiden," etc., 1893, p. 245.

CHAPTER III.

INJURIES OF THE ORBIT.

Contusions of the Margins of the Orbit.

Contusions of the margins of the orbit may excite periostitis, caries or necrosis of the bones at the site of the injury in scrofulous and badly nourished persons, especially children, whether extravasation have occurred or not. Such injuries are among the most frequent causes of those diseases in that class of patients.[1] The inflammation of the periosteum may terminate in resolution; but, as a rule, suppuration with the formation of an abscess takes place. Death of the bony structure may follow. The process may run an acute or a chronic course. It may be circumscribed, or it may extend to the adjacent orbital walls.

Especially when the inflammation runs a chronic course, the cicatricial tissue resulting therefrom will cause ectropium, or lagophthalmus, or it may restrict the movements of the eyeball. This may be the end of an acute attack as well. Periostitis, with or without caries or necrosis, may be complicated by a severe attack of orbital cellulitis resulting in the formation of an abscess in the orbital cellular tissue. The consequence of this may be inflammation and atrophy of the optic nerve, and consequent partial or complete blindness; or the patient may die from extension of the morbid process to the brain or its membranes.

When the inflammatory process involves the roof of the orbit, meningitis, or abscess in the frontal lobes of the brain, may set in and terminate life.

Contusions of the margins of the orbit may be productive of a lesion having clean-cut edges and resembling very closely an incised wound. Its usual site is near the superior margin of

[1] Berlin: "Graefe-Saemisch Handbuch d. ges. Augenheilkunde," vi., pp. 530, 581.

the orbit, but it has been observed over the inferior margin. The wound extends to the bone, the sharp edge of which severs the soft parts as they are driven upon it by the contusing force. For this reason, the superficial wound is less extensive than the subcutaneous wound. Beneath the integument, the soft parts are lacerated and separated to a greater or less extent from the subjacent bone. Such lesions are apt to suppurate.[1]

Fracture of the Margins of the Orbit.

Contusions may result in fracture of the margins of the orbit on which they impinge. The force of the blow is generally sufficient to produce a compound fracture, but the fracture may be a simple one. Owing to its more exposed situation, the superior margin is most frequently affected.

An excessive force may fracture or dislocate the malar bone. This will be evident from the deformity. Moreover, if anæsthesia involving the area supplied by the infra-orbital nerve be noted, it is probable that the inferior margin of the orbit has been fractured.

Uncomplicated fractures of the orbital margins, as a rule, lead to deformity only. Berlin cites a case of fracture of the infra-orbital margin from a stone bruise which terminated fatally by tetanus.[2] A compound fracture may inflame, suppurate, and endanger the patient's life as well as his eye.

When a compound fracture of the orbital margin is complicated by fissure of the roof of the orbit, the gravity of the injury is intensified. Meningitis, or abscess of the brain, may develop, and carry off the patient. Such fractures of the vault of the orbit are less dangerous than direct fractures in which the orbital margin is not involved.

Indirect Fracture of the Roof of the Orbit.

Injuries productive of fracture of the base of the skull frequently cause fracture of the roof of the orbit. The fracture in such cases is one in continuity. According to Berlin,[3] Prescott-Hewitt's statistics from St. George's Hospital give 23 cases of fracture of the roof of the orbit in 68 fractures of the base of

[1] For medico-legal case, see Berlin, *l.c.*, p. 582.

[2] *Loc. cit.*, vi., p. 584.

[3] *Loc. cit.*, p. 604.

the skull. Von Hölder[1] found in 124 cases of fracture of the base of the skull, that in 79 the roof of the orbit was also fractured. These lesions belong especially to the domain of general surgery. When, as sometimes happens, the victim of such a casualty survives, coincident and consecutive alterations in the function of his visual apparatus may become a subject for medico-legal investigation.

Immediately on recovering consciousness, the patient may complain of blindness of one or of both eyes. Failure of vision may be owing to lesion of both optic nerves or of the chiasm, by fragments of bone. Hemorrhage at the base of the brain may impair the function of the optic nerves, or of the optic tracts. Blood may be extravasated into the sheaths of the optic nerves and cause blindness. When the optic nerves, the chiasm, or the optic tracts are lacerated by spiculæ of bone, the resulting disturbance of function will be permanent. When hemorrhage interferes with the conductivity of those structures, the loss of function may be transient. The differential diagnosis between these sets of cases may be established only by the conditions observed after some weeks have passed. Restoration of sight would imply that the conducting apparatus had not been torn by fragments of bone.

Failure of vision may supervene not as an immediate consequence of the traumatism, but as a result of consecutive inflammation of the membranes of the brain, or of the brain tissue itself.

Indirect violence may fracture the roof of the orbit alone. Berlin[2] collected 27 cases of this description. In 1890, Koller reported 2 cases,[3] and, in 1893, Callan[4] reported 8 cases of the same nature. Similar cases have come under the writer's observation. The clinical picture of such accidents is a clear one. The patient receives a blow from a club, a stone, or the fist, in the orbital region, or he falls from a height (15 to 30 feet) or is thrown from a carriage or other rapidly moving vehicle (toboggan) and receives a contusion near the eye, or his head may be compressed under a wagon-wheel or a horse's hoof. One of Callan's patients fell down three steps of a stairway, struck the edge of an open door, and was wounded above his left eye.

[1] "Graefe-Saemisch Handbuch d. ges. Augenheilkunde," vi., p. 604.
[2] *Loc. cit.*
[3] N. Y. Med. Jour., April 12th, 1890.
[4] N. Y. Eye and Ear Infirmary Reports, vol. i., p. 1, 1893.

Symptoms of concussion of the brain are more or less marked. The patient may fall to the ground unconscious and remain in that state for many hours. Two or three days may pass before memory is restored. Or, the patient may not become unconscious, but complain of dizziness and faintness. Bleeding at the nose and vomiting of blood are common symptoms. On recovering consciousness, the patient may call attention to blindness on the injured side. Or, as happened in Callan's second case, the patient, whose consciousness is not suspended by the injury, may assert positively that blindness immediately followed the blow. The eyelids on the injured side will be discolored and œdematous. Subconjunctival extravasation and even exophthalmus may be present. Deviation of the eye inward, or more frequently outward, or even ophthalmoplegia may be found.

Ophthalmoscopic examination will give a negative result immediately after the injury. Nothing will be found in the eye to account for the blindness, excepting in cases where there has been a contusion, or other direct injury of the eyeball. Vieusse reported the occurrence of complete optic atrophy twenty-four hours after the injury, but Berlin [1] regarded it as an example of ischæmia of the optic nerve and retina. Callan [2] observed atrophy of the optic nerve one week after the injury. The appearance of the change may be delayed until the fifth week.[3]

In all of Callan's cases, atrophy of the optic nerve on the injured side was observed. Berlin refers to the fact that among 27 cases, in which visible traces of injury to the forehead and orbital margin of the right side were found, only one showed blindness of the opposite (left) eye.

Only one case of one-sided amaurosis in Berlin's statistics recovered, and two improved. In 10 cases, the vision of both eyes was affected; in some amblyopia, in others amaurosis. Five recovered, or improved. In 1 case, one eye remained blind, in 2 cases, both eyes remained blind, in the remaining cases the result was not known. Recovery was not noted in the other cases referred to.

The lesions in the class of injuries under consideration are believed to be fracture of the roof of the orbit involving the

[1] *Loc. cit.* [2] *Loc. cit.* [3] Berlin, *l.c.*

optic foramen, laceration of the optic nerve, and hemorrhage into its sheath. Direct proof that it is so, is, obviously, not obtainable; for the injury is seldom, if ever, fatal.

Direct Fracture of the Roof of the Orbit, Not Involving the Margin.

These fractures are compound. They are caused by direct violence, *e.g.*, thrusts of pointed instruments into the orbit (hay-fork, rapier, foil, sword, umbrella, walking-stick, knife, pointed sticks, etc.) or falls upon similar things (pencil-holders, etc.), or gunshot wounds,—even the missile from a blow-gun has fractured the roof of the orbit. Owing to the fragile nature of the bone in this region, a pointed weapon driven with moderate force into the orbit in an upward and backward direction will cause a fracture. The extreme gravity of the lesion depends upon three things: the violence inflicted upon the brain; the occurrence of intracranial hemorrhage; and the development of abscess of the brain or of meningitis.

Berlin[1] collected 52 examples of this lesion: 41, or 79 per cent, died; of these, 34 per cent died from the immediate effects of the injury; 11, or 21 per cent, recovered more or less completely—3 had hemiplegia, 1 suffered from headache, and 1 was weak-minded.

Callan reports one case of direct fracture of the roof of the orbit following the thrust of a foil between the nose and the eyeball. His patient recovered with atrophy of the optic nerve and divergent strabismus.

The upper eyelid, especially near the inner angle of the eye, is commonly punctured. Occasionally the weapon enters between the open eyelids and passes through the conjunctiva into the orbit. When this happens the existence of a wound may be overlooked. The eyeball is seldom injured. Having transfixed the integument of the eyelid and the conjunctiva, the weapon passes through the orbital cellular tissue, reaches the bone, fractures it, and may then lacerate the substance of the brain and even rupture one of the large blood-vessels. Fragments of bone may be driven into the brain, and a foreign body (*e.g.*, the ferule of an umbrella) may be lodged in the brain or

[1] *Loc. cit.*, p. 603.

in the fracture when the weapon is withdrawn, thus projecting into both the orbit and the cranial cavity. The course of the wound is not easy to follow through the soft parts. For, as the blow is delivered, the eyeball rolls upward and is pushed before the weapon. When the weapon is withdrawn the globe resumes its usual position, and thus the tract of the wound may be so distorted that a probe could not be made to follow it. Moreover, probing of such wounds must be done with caution lest further injury to the cerebral tissue be inflicted.

Hemorrhage from the wound and into the orbit, prolapse of orbital fat, and the appearance of cerebral tissue in the discharges, are indications respecting the depth to which the weapon may have penetrated. Among the cerebral symptoms, sudden loss of consciousness is noted in a large number of cases. The patient may die unconscious. After recovering consciousness, the patient's symptoms range from headache, vertigo, weakness of intellect, and prostration, to paralysis, unconsciousness, and coma, ending in death. The symptoms are those of intra-cranial hemorrhage, of injury to the brain substance, of cerebral abscess, or of meningitis.

Not all persons injured in this way suffer from cerebral symptoms immediately after the injury. A certain number do not have cerebral symptoms. According to Berlin,[1] the number of such cases is relatively large; he refers to 14. Both physician and patient may be disposed to consider the injury a trivial one, owing to the apparently insignificant wound and the general condition of the patient; while, later on, stupor, vertigo, convulsions, unconsciousness, sopor, and a febrile movement may develop and kill the patient, or he may die suddenly. The following cases illustrating various phases of this class of injuries are cited by Mackenzie.[2]

"CASE 14.—Ruysch relates the case of a man who was wounded in the left orbit with the end of a stick, not particularly sharp. The injury appeared of little importance, yet the patient died soon after receiving the wound. The magistrates appointed Ruysch to examine the body, in order to discover the cause of sudden death. Externally, he observed a slight degree of ecchymosis at the upper part of the eye, but on removing the calvaria, he found that the wound had penetrated to a considerable depth into the brain.

[1] *Loc. cit.*, p. 602. Mackenzie: "Diseases of Eye," Phil., 1855, p. 60.

[2] *Loc. cit.*, p. 53 *et seq.*

"Case 15.—Peter Borel mentions a still more remarkable case of a man who was wounded with a sword in the left orbit. Thinking the wound had not penetrated deep, he merely covered it with plaster, after which he walked two leagues, and ate and drank heartily with his companions, exactly as if he had been well, being affected with no pain. Next morning he was found dead. The skull was opened, when the wound was found to have penetrated the cerebellum.

"Case 16.—A man was brought into the London Hospital, April 12th, 1832, with a lacerated wound of the right upper eyelid. He stated that, while working on board ship discharging coals, a hook used for raising the coals caught him by the eye, so that he was elevated to the height of several feet. His companions, observing what had happened, suddenly let go the rope, so that the poor fellow fell heavily on the deck. He immediately withdrew the hook himself. On his admission to the hospital, he did not appear to be suffering from any serious injury. The eyeball was uninjured, and no fracture could be detected; his respiration was natural; his pulse 76, full, but not more than might have been expected in a robust man; pupils obedient to the light; no pain in the head. . . . He passed a quiet night. . . . The next morning he had very little pain in the head. . . . Symptoms of compression of the brain came on very suddenly in the evening. His breathing became stertorous; his pupils contracted and insensible to the stimulus of light; pulse 52, and laboring; he could not be roused by any noise. At this time a quantity of blood, mixed apparently with cerebral substance, to the amount of about two ounces, escaped from the wound. . . . He lingered in this state until two o'clock the next morning, when he died.

"The orbitary plate of the frontal bone was found to be completely smashed, and a considerable portion of the anterior lobe of the right hemisphere of the brain wanting, it having escaped through the wound.

"Case 17.—A countryman, about 55 years of age, was asked by one who met him to step out of the way; but as he was carrying a heavy burden at the time he could not do so, and therefore refused. The other, provoked at this, struck the countryman violently over the shoulders with a whip, and when the whip broke thrust the sharp end of the broken shaft of the whip in the countryman's face. Not apprehending any dangerous effects from the blows which he had received, the countryman, with his burden on his back, trudged along after his cart, which was loaded with wood, for nearly a quarter of a mile, till he arrived at the wood-market, when he instantly dropped down dead.

"Schmid was appointed to inspect the body. On examining the head externally he found that the sharp end of the stick had penetrated at the inner canthus of the right eye. He endeavored to ascertain with the probe whether the wound had reached the brain; but he could not on account of the narrowness of the wound. Having opened the

cranium, the brain and its membranes at first view appeared sound; but, on raising the anterior part of the cerebrum, the nasal extremity of the falx was observed to be injured, and it was found that the wound had penetrated into the third ventricle, in which lay a considerable quantity of clotted blood.

"CASE 18.—A man, standing at the head of a horse which had fallen in the street, was suddenly struck in the face, upon the animal raising itself unexpectedly. The blow was so violent that he was thrown down by it, but not stunned. He was of the opinion that it was not the head of the horse, but some part of the harness, that had struck him. There was a bleeding wound between the left eye and the nose, about an inch long, dividing the lachrymal canal and the palpebral tendon. A probe was introduced to the depth of three-quarters of an inch into the wound, in the direction of the inner wall of the orbit, but without the bone being felt. The left eye was uninjured. The right eye, without any perceptible injury, had entirely lost the power of vision. Its pupil was dilated to the utmost; and, although its common sensibility, as well as its different motions, was perfect, a lighted candle held close before it caused no contraction of the pupil, nor any sensation of light. The patient answered questions promptly and clearly, and evinced no symptoms of injury extending to the brain, except that he complained of a little headache. The bones of the nose were examined, but no crepitus could be felt; neither was there any ecchymosis to indicate injury on the right side. Delirium, however, and stupor supervened on the following day. . . . In the evening convulsions came on; the left arm and leg were stiff and contracted, while the right extremities were in constant motion. The pupil of the right eye was now found to be contracted. . . . The left side and extremities subsequently became paralytic, while the right was tranquil. He died convulsed on the fifth day after the accident.

"On dissection, the brain and its membranes were found loaded with vessels, and there was a copious deposit of lymph between the arachnoid and the pia mater, over both hemispheres. A large accumulation of serum, with purulent matter diffused in it, was present in both lateral ventricles. The whole lower surface of the anterior lobes was adherent to the dura mater, by means of coagulable lymph. The optic nerves being exposed, the right was seen to be torn completely through or its ends joined only by delicate membrane close to the foramen opticum. The base of the brain, from the medulla oblongata to the chiasma, was thickly covered with a layer of lymph, which obscured the roots of the nerves. In the posterior part of the right anterior lobe, close to the injured part of the optic nerve, and approaching to the anterior cornu of the lateral ventricle, the brain was bruised, softened, and ecchymosed. The cause of the laceration of the brain and tearing across of the optic nerve was found to be a fracture of the cerebral plate of the ethmoid

bone, with part of the sphenoid forming the roof of the foramen opticum. The fractured fragment of bone was found loosely attached by dura mater to the forepart of the sella turcica, above the right cavernous sinus. On introducing a probe into the external wound, it could be made to pass, by a slight degree of management, into the crushed part of the ethmoid, and to appear within the skull. . . .

"Case 21.—A soldier was brought to the hospital at Brest, at eleven o'clock in the evening, having been wounded with a pitchfork at the middle of the left upper eyelid. The wound was oblique, about three lines in length, and appeared to implicate only the skin and orbicularis palpebrarum; there was very little blood discharged; the eyelid was distended and the conjunctiva inflamed. The apparent simplicity of the wound, the goodness of the pulse, and the free exercise of all functions, led to a favorable prognosis; the patient asserted that he had experienced nothing particular at the moment of the injury, and had scarcely been stupefied by it. . . . The patient rested during the night; next day he was quite lively, walking about the wards, complaining only of slight pain in the wound, and even eating with appetite. The same day, at seven in the evening, he was seized with convulsions, which were supposed by his attendants to be epileptic. The day after, he was kept from food, and bled at the arm; the convulsions returned, and he was bled at the foot. Vomiting, uneasiness, agitation, and delirium came on; the pulse became smaller and contracted; cold sweats succeeded, and the patient died at two o'clock next morning.

"On dissection, the eyelids were found œdematous, and the wound had already closed. On cutting through the upper eyelid and orbicularis palpebrarum, a circumscribed collection of pus was found in the orbit between its roof and the levator palpebræ superioris. This collection of pus communicated with the cranium through the orbitary plate of the frontal bone, which had been penetrated by one of the prongs of the fork. After removing the eyeball, the inferior wall of the orbit was found fractured, and depressed almost completely into the maxillary sinus. This fracture is compared by M. Massot, the narrator of the case, to the depression which might be produced on the surface of an egg, by pressing it inward with the thumb. On removing the calvaria, the dura mater appeared in a morbid state at that place, the anterior fossæ of the base of the cranium were covered with pus, the anterior lobes of the cerebrum were in a state of suppuration, and the rest of the brain healthy. M. Massot thinks it probable that, when the fork was pushed through the orbit into the cranium, the eyeball being fixed and violently pressed between the fork and the floor of the orbit, the thin plate of the superior maxillary bone could not resist this pressure, but sank by continued action of the fork upon the eyeball.

"Case 31.—A lieutenant in a Highland regiment, running on a dark night to escape a shower of rain, came in contact with an irritable

old man, who made a thrust at him with an umbrella, the point of which struck him immediately beneath the left eyebrow. The wound was attended with so little pain or shock to the system, that the gentleman walked a distance of at least half a mile, to Sir Philip Crampton's house; and having mentioned the occurrence as one to which, however, he attached no importance, begged Sir P. to look at the wound on the eyelid, which still continued to bleed slightly. Sir P. found a wound of about three-fourths of an inch in length in the upper eyelid, exactly in the seat of the fold formed in this part by the action of opening the eye, on looking up. When the eyeball was so turned, there was no appearance of wound; but when the eyelid was drawn downward, the wound gaped and showed the conjunctiva, which still completely covered the upper portion of the ball of the eye. Vision was quite unimpaired. The wound having been united by two points of suture, the patient took his leave and walked home. Sir P. called on him next morning, and found him at breakfast, making no complaint, but of some stiffness in the eyelid. Next morning at seven o'clock, Sir P. was called to him in a hurry, and found him in so strong convulsions that it was with difficulty two persons were able to keep him from working himself out of bed. The convulsions continued, with short intervals of coma, till eight or nine o'clock in the evening, when he expired.

"At the post-mortem examination it was found that the brass ferrule of the umbrella, nearly two inches long, had penetrated the orbital plate of the frontal bone, and was lodged in the substance of the left hemisphere of the brain; it was imbedded in a thin coagulum of blood, which extended into the left lateral ventricle; both ventricles contained a small quantity of bloody serosity.

"Case 25.—A laborer thrust a long lath, with great violence, into the inner canthus of the left eye of another laborer. It broke off quite short, so that a piece nearly two inches and a half long, half an inch wide, and above a quarter of an inch thick, remained in his head, and was so deeply buried that it could scarcely be seen or laid hold of.

"He rode with the piece of lath in him above a mile, to Barnet, where Mr. Morse extracted it with difficulty, it sticking so hard that others had been baffled in attempting to remove it. The man continued dangerously ill for a long time; at last he recovered entirely, with the sight of the eye and the use of its muscles; but, even after he seemed well, upon leaning forward he felt great pain in his head.

"Case 26.—Percy had under his care a fencing-master, who in an assault received so furious a thrust from a foil on the right eye, that the weapon penetrated nearly half a foot into the head, and broke short. The man fell down in a state of insensibility, and very soon the supervening swelling was so great as to conceal the foreign body. In order to lay hold of it, Percy opened and evacuated the contents of

the eyeball. His forceps not being strong enough, he sent to a clock-maker in the neighborhood, and borrowed from him a pair of screw pincers, with which he laid hold of the broken end of the foil, and thus succeeded in extracting it. The fencing-master died some weeks after, more from the consequence of intemperance than of the injury.

"Case 33.—Mr. White relates the case of a person, to whom it happened that, as he sat in company, the small end of a tobacco-pipe was thrust through the middle of the lower eyelid. It passed between the globe of the eye and the inferior and external circumference of the orbit, and was forced through that portion of the os maxillare which constitutes the lower and internal part of the orbit. The pipe was broken in the wound, and the part broken off, which, from the examination of the remainder, appeared to be above three inches, was quite out of sight or feeling, nor could the patient give any account of what had become of it. The eye was dislocated upward, pressing the upper eyelid against the superior part of the orbit; the pupil pointed perpendicularly upward, the depressor oculi was upon the full stretch, and the patient could see none with that eye. Mr. White applied one thumb above and the other below the eye, and after a few attempts at reduction it suddenly slipped into its socket. The man instantly recovered perfect sight, and suffered no other inconvenience than that of a constant smell of tobacco-smoke in his nose, for a long time after, for, as he informed Mr. White, the pipe had just been used before the accident. About two years afterward he called upon Mr. White, to acquaint him that he had, that morning, in a fit of coughing, thrown out of his throat a piece of tobacco-pipe, measuring two inches, which was discharged with such violence as to be thrown seven yards from the place where he stood. In about six weeks he threw out another piece, measuring an inch, in the same manner, and never afterward felt the least inconvenience.

"Case 34.—A boy of 14 years of age was struck by an arrow, while amusing himself in his playground. It stuck fast in the orbit; but the boy pulled it out, and threw it on the ground. A surgeon arrived, to whom the playfellows of the boy who was wounded showed the arrow, deprived of its iron point. With a probe the surgeon attempted to examine the wound; but, on the boy fainting, he desisted, so that the iron point was left in the orbit. The external wound healed, and the boy recovered; the eye remained clear and movable, but deprived of sight. This happened in the beginning of August, 1594, and nothing more was heard of the iron point till October, 1624; when, after an attack of fever and catarrh, with a great deal of sneezing it descended into the left nostril, whence, taking the way of the fauces, it came into the mouth and was discharged. During the whole thirty years and three months that it had remained in the head, it had not been productive of any pain.

"Case 22.—The son of General E., a student at the Polytechnic School in Paris, received, in fencing, the end of the foil through the roof of the orbit, and became hemiplegic on the opposite side of the body. The eye was saved.

"Case 23.—Thomas Hale, aged 35, was assisting in hay-making. A scaffolding had been erected at the side of the hayrick; and while his companion, a man named Joslyn, was in the act of throwing some hay upon it, the pitchfork missed the hay, and struck Hale in the right eyebrow. Instead of drawing the pitchfork out, Joslyn, under the impression that he had caught the hay, thrust it farther in, the one prong entering Hale's orbit, while the other glanced over the outside of his head.

"When the prong was withdrawn, which was accomplished with difficulty, Hale turned to leave the field, having the impression that his eye had been driven out of his head; but he had not proceeded more than five or six yards before he fell, his left side crippling under him. In other respects he recovered, but the palsy continued, the fingers of the left hand being contracted, and the left foot swinging about, although he became able, in the course of some months, to walk at the rate of a mile in thirty minutes. Dr. Roe, who published the case, had given a trial to strychnia internally, and to electro-magnetism, without any very striking improvement. Hale continued to taste, smell, and see as well as ever."

Fracture of the Inner Wall of the Orbit.

These fractures may be either direct or indirect. When direct they are due to gunshot wounds, blows from umbrella handles, etc., falls upon iron hooks, etc., injury by the calks of horseshoes, etc. Indirect fractures may be due to falls, blow of fist, etc. Direct fractures are compound, and may be recognized, as a rule, without much difficulty. The diagnosis of indirect fracture is indicated by hemorrhage from the nose and emphysema of the orbit. Emphysema of the orbit is a crepitating swelling produced by the entrance of air into the areolar tissue through the fracture, when the patient blows his nose or sneezes. It may occur in fracture of the roof of the orbit, the air entering the areolar tissue by way of the frontal sinus. This is uncommon. It may occur also in fracture of the floor of the orbit; then the antrum is the avenue by which the air reaches the site of the lesion. Emphysema of the orbit is, however, generally due to fracture of the inner wall. These lesions may be complicated by fracture of the roof of the orbit. Ordinarily they

do not threaten the patient's life. Deformity may result from them.

Fracture of the Floor of the Orbit.

They may be gunshot fractures, or they may be due to heavy blows upon the face, or they may be caused by a force pushing the eyeball through the bone.

Fracture of the External Wall of the Orbit.

Considerable violence is necessary to cause these fractures. They are usually compound fractures and occur most commonly in gunshot wounds. Extensive fractures of this wall may open the cranial cavity, and endanger life. Fissures extending along the base of the skull may occur as a complication. Some deformity of the face remains.

Wounds of the Soft Parts of the Orbit, Not Including Injuries to the Eyeball.

Sword-thrusts, thrusts of pointed sticks, canes, umbrella handles, knife blades, etc., or missiles like fragments of iron, copper, or stone, bird-shot, bullets, etc., sometimes wound the soft parts in the orbital cavity without injuring the eyeball. The anatomical structures involved in these traumatisms are the cellular tissue, the blood-vessels, the ocular muscles, the nerves supplying those muscles, the branches of the fifth nerve supplying sensation to the cornea, and the optic nerve. In certain cases, fracture of one of the walls of the orbit exists as a complication: when the roof of the orbit is involved, the gravity of the injury is greatly magnified. A weapon or a missile perforates the eyelid, the conjunctiva, and the *septum orbitæ* before it wounds the soft parts of the orbit. The blow may fall, however, when the eye is open, and then the eyelids may escape injury. In general, the blow is delivered point-blank, or nearly so, and the weapon commonly enters the orbit to the nasal side of the eyeball.

Merkel found the depth of the orbit to be in men 43 mm., in women 40.5 mm. These figures are approximately correct for adults. Children's orbits are much shallower; according to Lushka, in one instance the measurement was 26 to 27 mm.

After one of these injuries, a foreign body may or may not remain lodged in the orbit. Certain effects are observed to follow traumatisms of the soft parts of the orbit irrespective of the lodgment of a foreign body therein. Thus, laceration of the blood-vessels is an accompaniment of every wound. The hemorrhage is intra-orbital; its volume depending upon the number and the size of the vessels injured (especially arteries). The bulk of the extravasation accumulates in the orbit and only a relatively small portion escapes by the wound, which is usually of restricted calibre. Accumulation of blood in the orbit displaces the eyeball forward (exophthalmus) toward the point of least resistance, and possibly in a vertical or a lateral direction, according to the position of the principal bleeding point. Exophthalmus may be so marked that the eyelids cannot close over the cornea. This state may excite inflammation and ulceration of the cornea and terminate in destruction of the eye.[1] Vision, in average cases, may not be affected or it may be very much impaired, presumably by virtue of pressure upon the optic nerve by the extravasation, or by virtue of the tension of the optic nerve due to the altered position of the eyeball, or perhaps by both conditions working together. In nearly all cases, no ophthalmoscopic explanation of the amblyopia or amaurosis will be found. Unless the acuteness of vision is very much reduced, the patient will complain of diplopia.

Resorption of the extravasated blood, return of the globe to its normal position, and restoration of function may, in general, be prognosticated. Still, recovery may not be complete. Amaurosis or amblyopia may become permanent, if the resorption take place slowly; or the eyeball may become phthisical by virtue of an excessive exophthalmus, as in Berlin's cases.

The ocular muscles may be injured. According to Berlin,[2] the ocular muscles, as regards frequency of the occurrence, are injured in the order in which they are named as follows: *rectus internus*, *rectus inferior*, *levator palpebræ superioris*, *rectus superior*, *rectus externus*, *obliquus superior*, *obliquus inferior*. The levator palpebræ superioris, as its name signifies, simply elevates the upper eyelid, and does not affect the movements of the eyeball. Division of its fibres gives rise to traumatic ptosis. Partial or complete division of one, or of any

[1] Berlin, *l.c.*, p. 576. [2] *Loc. cit.*

combination of the ocular muscles, will disturb the movements of the eyeball and alter the direction of the visual line of the affected eye. It is conceivable that bruising of the muscles, without division of their fibres, may produce the same conditions. While it may be expected that bruising will impair the usefulness of a muscle for a brief period only, both partial and complete division of its fibres will produce a permanent impairment of function, unless operative interference be successful in repairing the rent.

Such lesions cause diplopia with strabismus, or diplopia without apparent deviation of the line of sight, according to the extent of injury to the muscles. Diplopia will not be present when vision is very much affected, and may not be complained of when the strabismus is excessive, owing to great separation of the images. Strabismus in these patients possesses the characteristics of the paralytic varieties. The diplopia likewise is characteristic. Careful observation of the behavior of the double images will reveal which muscles are affected, even when the injury is a minor one. Malingerers may pretend that they see double in consequence of an accident to an eye, or to the head. Children sometimes, without intending to deceive, complain of the same symptom. Such frauds may be detected by observing the relations maintained toward each other by the double images, since it is not possible for a patient to avoid giving answers that do not radically conflict with one another, unless diplopia be really present. Convergence of both eyes and diplopia may be produced by voluntary effort, and maintained for a few moments at a time. It is also possible to wilfully cause convergence of one eye only. A person of my acquaintance was able to do this; he could also rotate one or the other eye upward at will. Such control of the ocular muscles is very exceptional.

Diplopia with slight rotation of the eyeball is more troublesome to patients than diplopia with marked strabismus; for, in the former, the double images are near together and both are constantly seen, while in the latter they may be widely separated and only one of them lie in the field of fixation. Double vision is sufficient to incapacitate one for all kinds of work. It may endanger life indirectly, by exposing the patient to mishaps in the street, or in going up and down stairs, etc. Patients are

obliged to close the affected eye to get about, or they hold their heads in strained and peculiar positions to suppress the false image. The false image is suppressed at the expense of vision in one part of the field. Sense of perspective is wanting.

Careful suturing of the divided muscle will restore the balance of the ocular muscles, in the more simple cases. Unless operative interference succeed in this line, the diplopia will be permanent. But, after weeks or months, the patient will be able to suppress the false image, and learn to compensate for his sense of perspective, to some extent. When more than one muscle is involved in the injury, less benefit may be anticipated from operative interference.

Paralytic strabismus and diplopia are likewise the consequence of intraorbital lesion of the nerves supplying the ocular muscles. These lesions are rare and incurable.

Intra-orbital branches of the fifth nerve supplying the cornea with sensation have been wounded. Resulting anæsthesia of the cornea predisposes to ulceration of that structure and hence to destruction of the eyeball by inflammation.

A weapon or missile penetrating deeply into the orbit may wound the optic nerve. The central artery of the retina enters the optic nerve about 10 mm. behind the eyeball. Division of the nerve may be partial or complete, and may occur between the point of entrance of the central artery and the eyeball, or behind that point. Blindness, either partial or complete, is the immediate consequence. If the wound lie between the entrance of the artery and the globe, the ophthalmoscopic appearances, in the early stages, will be similar to those observed in cases of embolism of the central artery of the retina. Subsequently the nerve atrophies. Division of the central artery before it enters the sheath of the nerve will cause similar disturbances. When the lesion in the optic nerve lies behind the entrance of the artery, the ophthalmoscopic appearances are normal in the early days. After two or more weeks, atrophy of the nerve is observed. When the atrophy is partial, it is probable that the optic fibres were not severed completely.

Fragments of iron, copper, stone, etc., missiles from pistols, rifles or shot-guns, pieces of wood, twigs of trees, ferules from umbrella-handles or walking-sticks, knife-blades, needles, and other bodies may effect a lodgment in the orbital cavity. They

may be located in the soft parts, or they may become embedded in one of the bony walls and project into the orbit. Foreign bodies lodged in the orbit may be large enough to displace the eyeball and restrict its movements. The displacement may amount to dislocation of the eyeball. When resorption of the extravasated blood has taken place, the eyeball will still remain displaced, if a large body be lodged in the orbit, and, similarly, restriction of the movements of the globe will persist until the obstruction is removed. Vision may be destroyed while the globe is displaced, but it may return when the foreign body is removed and the eye restored to its normal position. When the injury is fresh the foreign body may be seen if the wound be large, or it may be felt with the probe if the body be not too small. Probing, under antiseptic precautions, is advised when there is reason to suppose that a foreign body has lodged in the orbit. It is the most fruitful means of diagnosis in these cases, but it does not always give accurate information.[1]

Wounds of the orbit heal promptly, as a rule. Orbital cellulitis and abscess are seldom observed unless the wounds have been infected. Even when foreign bodies are lodged in the orbit, unless they are of large size or carry the germs of infection, the wounds close in a short time. Small bodies like bird-shot and bullets of small calibre, and other aseptic or nearly aseptic substances, frequently become encapsulated, and may not give rise to any further disturbance.

The wound may close over the foreign substance, and subsequently open, leaving a discharging sinus. Or the wound may not heal, but continue to discharge. Both circumstances are indicative of the presence of extraneous matter in the tissues. In such cases, an attempt to find the foreign body should be made. In fresh cases, when the position of the body is located, it should be removed: a possible exception may be made when the foreign body is imbedded in the bony walls at the apex, or in the roof of the orbit. The propriety of removing foreign bodies imbedded in those portions of the walls of the orbit may be questioned. Surgical interference in such injuries may sacrifice the patient's life by causing intra-cranial hemorrhage, or inflammation of the brain. Expectant treatment may also expose the patient to fatal complications within the cranial

[1] See cases cited under direct fractures of roof of orbit, pp. 33–39.

cavity. Between these alternatives, the choice may very properly be given to operative interference conducted cautiously by the principles of the antiseptic method, as affording the patient the best chance for his life. If, however, the foreign body have become encapsulated and its presence be not causing any serious disturbance, no attempt at removal of it should be made, even though it be imbedded in the bones separating the orbital from the cranial cavity and project into the cerebral substance. Operations upon such cases have proved fatal at the hands of the best operators.[1]

The following case cited by Mackenzie shows the dangers encountered in operations on these cases:

"Case 29.—A girl, 10 years of age, playing along with other children, near a cotton-spinning machine, fell upon one of the pointed iron spikes, five or six inches long, on which the bobbin is placed. This instrument penetrated to the depth of about two inches into the orbit, between the inner wall and globe of the eye, and then broke across, so that 2 or 3 lines' length of it projected above the level of the skin. Attempts were made to remove it; but so much difficulty was experienced that these attempts were not persisted in. Ten days afterward, the piece of iron was found protruded to the length of 9 or 10 lines; a month afterward, it was still more protruded; in fact, it now held apparently so slightly, that it was laid hold of with the fingers and extracted. Scarcely had this been done, when the child was seized with convulsions, and died in a quarter of an hour. The sight had not been affected during the residence of the foreign body in the orbit, nor had its presence there excited any very marked symptoms. The child had always been able to go about."

The following cases are cited by the same author, and are evidence that removal of foreign bodies wedged in the roof of the orbit and injuring the cerebral substance is followed by a favorable result, in some severe cases:[2]

"Case 27.—Sabatier notices an instance of wound with a knife, through an upper eyelid, with injury of the neighboring edge of the frontal bone. It was not, he says, till after four hours' work, that the surgeon succeeded, by means of a hand-vice, in tearing away the portion of the knife-blade which remained in the orbit, on account of its projecting so little from the wound. The patient complained of severe

[1] Pagenstecher's case, *vide* "Traité complet d'Ophthalmologie," t. iv., p. 800.

[2] For other similar cases see article on direct fractures roof of orbit, pp. 33–39.

pain, as if one had been tearing out his eye. No ill consequence followed; the cure was speedy, and without any affection of sight.

"Case 28.—A laborer, aged 51 years, while cutting wood in a forest, stumbled over the root of a tree, and with the whole weight of his body drove the end of a file, which he held in his hand, against his left eye. The file broke across, and a portion of it remained in the orbit. The patient was carried, in a state of insensibility, to a small town some miles off, where three surgeons tried by turns, but in vain, to extract the foreign body, which, with the probe and the forceps, they felt distinctly, through the wound, beneath the middle of the eyebrow. They enlarged the wound with the knife, and during three days made reiterated attempts at extraction; but the foreign body continued immovable. On the fourth day, the patient was brought to the surgical clinic at Prague. The eyelid was greatly swollen, and in the middle of it there was a triangular wound, with inverted edges. The eyeball was motionless, and was so pushed downward and outward that it almost lay on the cheek, carrying the lower eyelid before it. The cornea presented more than an ordinary degree of lustre. The patient was nearly comatose. Fritz endeavored, by means of strong pincers and polypus-forceps, to withdraw the foreign body, but these instruments bent under the pressure. At last, with a pair of small but very strong lithotomy-forceps, which he grasped with both his hands, he succeeded in extracting the piece of the file.

"It was triangular, measured an inch and a half in length, and was dentieulated to its point, which was blunt. The patient answered questions very slowly, or not at all; his face was pale and sunk, his eyes were shut, and he lay motionless, except that he often raised his left hand to the left side of his head. Respiration slow; pulse oppressed and hard. The wound gaped widely; the eyelid, almost completely divided into lateral halves, was of a dark red color, and so much swollen as to allow only a small portion of the displaced eyeball to be seen.

"Notwithstanding the repeated use of venesection and of leeches and constant cold applications to the eyes, the cornea filled with pus, and giving way about the twelfth day, allowed the iris to protrude. The cornea was ultimately left in an opaque and atrophied state. The wound suppurated abundantly, and for some time a probe could be passed along it, in a direction backward and inward, beneath and through the orbitary portion of the frontal bone, to the depth of five inches, without causing pain. At length the wound closed, the upper eyelid remaining palsied. The patient's general health was perfectly restored.

"Case 33.—Marchetti had under his care a beggar, who, asking charity rather importunately one summer's day from a Paduan nobleman, this testy personage struck the beggar with the handle of his fan,

in the inner angle of the eye, and with so much force that a portion of the fan, three inches long, broke through the orbit, and sank out of sight in the direction of the palate. When the man came to the hospital, Marchetti removed some small bits, which he found sticking in the angle of the eye, combated the inflammation, allowed the wound to close, and dismissed the patient as cured. In three months he returned with a large swelling in the palate. When Marcetti cut into it, his knife struck upon the handle of the fan, which he immediately extracted with a pair of forceps. The patient speedily recovered."

Traumatic Enophthalmus.

Traumatic enophthalmus is an uncommon condition in which the eyeball sinks into the orbit, in consequence of wounds or contusions of the region of the eye. Beer has collected fifteen cases that constitute the data of his dissertation, a translation of which may be found in Knapp-Schweigger's *Archives of Ophthalmology.*[1] The force required to produce enophthalmus is a heavy blow or a severe wound, such, for example, as would be inflicted by the horn of a cow.

In one case (Schapringer's) the enophthalmus disappeared after three days. It was permanent in the remaining cases. The affected eye was found to lie from 2 to 8 mm. deeper in the orbit than its fellow. Vision and mobility of the eye remained normal in some of the cases. No cicatrices existed in the region of the eye. In other cases wounds of the soft parts, even deeply penetrating wounds of the orbit, complicated by fracture of the orbital walls, were present. Vision was impaired in these cases.

One case became totally blind: "a soldier whose right eye was injured by a falling stick of wood. The sight at once began to fail and there was periodic pain above the eye. Seven months after the injury, the right lids were retracted as in *phthisis bulbi*, and the palpebral fissure was decreased in size. When the upper lid was elevated the ball rolled upward. Pupil and fundus normal. In the right eye, there was no vision; in the left, fingers were counted at 10 feet. A pulsating pain in the region of the eye, temples, and ears, particularly at night. After some months there was complete blindness, while the pain and retraction of the ball remained as before. The right globe

[1] Vol. xxii., 1, pp. 98–106.

lay six lines behind the superior margin of the orbit, the left four and one-half lines."

In most of the cases, the movements of the globe were restricted by paralysis of the muscles or by cicatricial tissue. Homonymous diplopia occurred in one case.

Pulsating Exophthalmus.

Protrusion of the eyeball with exaggerated pulsation in the orbit, depending upon an aneurismal condition of the blood-vessels (aneurism by anastomosis (?), arterio-venous aneurism (?), diffuse aneurism, aneurism of the ophthalmic artery, rupture of the carotid into the cavernous sinus), may be either traumatic or idiopathic. The recorded traumatic cases show that the following injuries may operate as the exciting cause: a penetrating wound of the orbit made by an umbrella-handle, by a fork-like ornament of a parasol, by a knitting-needle, by a fall upon a stick, and by bird-shot. A discharge of shot received in the left orbit has caused pulsating exophthalmus of the right eye. And a wound through the left lower eyelid by the handle of an umbrella has caused pulsating exophthalmus of the opposite (right) side. One patient was wounded at the inner side of the left upper eyelid by the bursting of a soda-water bottle, and a pulsating tumor developed at the site of injury. Among the indirect causes capable of producing this disease are cited falls upon the head, blows upon the temple, blows upon the back of the head, blows upon the nape of the neck, blows upon the forehead, and blows in the region of the eye. The blow must be a severe one, but unconsciousness does not necessarily follow. In one recorded case a knock-down blow with the fist in the temple was followed by pulsating exophthalmus. And a blow upon the nape of the neck from the fist of a very muscular man has caused bilateral pulsating exophthalmus.

The condition is confined to one side, in nearly all cases. In penetrating wounds of the orbit it may occur on the opposite side. Bilateral pulsating exophthalmus has been observed in a few cases.

Idiopathic cases begin commonly with a noise in the head; the exophthalmus develops later on. In traumatic cases, the symptoms are developed, as a general rule, within nine months

of the accident preceding the affection. "More than half the cases," cited by Rivington,[1] "exhibited all the symptoms within two months. Some of the cases were not seen till a much later period, but from the history it is clear that all the symptoms were well established a few weeks after the injury. In two cases only was there an interval of years." It is probable that in most of the traumatic cases there was a fracture of the base of the skull.

According to Rivington,[2] "the typical symptoms of the so-called 'intra-orbital aneurism' are exophthalmus, a chemosed pad of conjunctiva concealing the lower lid, pain, paralysis of orbital muscles and iris, with or without anæsthesia, pulsation of the eyeball, a pulsating tumor above the eye beneath the inner part of the orbital arch, distention of conjunctival vessels, obliteration of the hollow beneath the orbital arch, bruit and noises in the head. Pulsation of the eyeball, a pulsating tumor, and paralysis of ocular muscles may be absent without contra-indicating the diagnosis of aneurism; but I do not think that any case should be regarded as aneurismal in which a bruit cannot be heard, or be placed under the head of 'intra-orbital aneurism' unless, in the absence of pulsation, exophthalmus and congestion of conjunctiva accompany the bruit."

It is not possible to differentiate the traumatic from the idiopathic cases by studying the aneurismal conditions alone. The history of the case must, in certain instances, be positively formulated before such differentiation may be made. A traumatism which subsequently results in pulsating exophthalmus may leave no other evidence that it has been received. Even penetrating wounds of the orbit (*e.g.*, puncture made by a knitting-needle) may leave no discoverable cicatrix, yet such lesions may be succeeded by pulsating exophthalmus. Traumatic cases are more common than idiopathic; they are much more common in men than in women; while, on the contrary, idiopathic cases are much more common in women than in men.

Spontaneous recoveries are recorded, but such cases are uncommon. Traumatic cases may have a fatal termination through secondary hemorrhage. Not only the danger to life, but the deformity, the disturbance of vision, and the distress

[1] Medico-Chirurgical Transactions (London), vol. lviii., p. 211.

[2] *Ibid.*, p. 213.

occasioned by the noises in the head must be considered, while estimating the effect of this affection upon the welfare of the patient. The deformity is unsightly. Vision of the affected eye may be totally destroyed by the injury, or, subsequently, by the exophthalmus, by pressure upon the optic nerves, by changes in the retinal vessels, or by ulceration of the cornea. The latter may or may not end in perforation and panophthalmitis. Sometimes diplopia exists in a troublesome degree.

Again, it is likewise important to take into consideration the dangers incident to the treatment of this affection, while estimating the importance of it. For, inasmuch as ligation of the common carotid is the treatment most productive of favorable results, it is the method of cure to be selected in preference to others, and in itself it involves a certain risk to the patient's life (8 deaths in 63 operations).[1] Even that operation has failed to cure in 17 out of 55 cases, collected by Sattler.[2]

[1] Sattler: "Graefe-Saemisch Handbuch," vol. vi., p. 933.

[2] *Ibid.*, p. 927. For exhaustive discussion of this affection, consult Rivington, *op. cit.*, and Sattler, *op. cit.*

CHAPTER IV.

INJURIES AND WOUNDS OF THE EYELIDS.

Contusions.

Contusions of the eyelids are followed by subcutaneous extravasation of blood (ecchymosis, suggillation, "black eye"). The extravasation may be small, or it may be great enough to close the eye. After a severe contusion, the ecchymosis generally appears immediately; after milder injuries, it may not become visible for some hours.

Subcutaneous extravasations of blood in the eyelids are not always a consequence of direct violence. They may occur spontaneously in persons having a tendency to cerebral apoplexy. They have been observed, in rare cases, as a symptom of disease, *e.g.*, *purpura hæmorrhagica*. They have been caused by straining in whooping-cough. They occur in nearly all cases of fracture of the vault of the orbit, whether the fracture be the result of direct violence or not. Fissures in the vault of the orbit may not extend beyond the frontal bone, or they may be continuous with a fracture of the base of the skull. Palpebral ecchymosis may be due also to fracture of the bones composing the lateral walls, or the floor of the orbit.

When ecchymosis of the eyelids originates in fracture of the bones of the orbit, subconjunctival extravasation is observed as a precedent symptom. In cases of this nature, the extravasated blood infiltrates the deeper tissues of the orbit, spreads forward under the conjunctiva of the eyeball, and appears beneath the integument of the eyelids. Such palpebral extravasations may appear first near the inner canthus; and eighteen or twenty-four hours may pass after the injury before any discoloration of the eyelids becomes manifest.

Palpebral ecchymoses have been observed after contusions of the abdomen and of the thorax. They may be produced by

strangulation. Such extravasations have the same aspects as if they originated in fracture of the base of the skull.

Ammon described a "sympathetic suggillation," by which he meant an ecchymosis appearing in corresponding parts of the face about both eyes. Fracture of the skull involving the walls of both orbits may be the causal lesion in such cases. But the condition has been observed, without fracture, after enucleation of the eyeball.

Cases of amblyopia and amaurosis supposed to arise by reflex action from contusions of the supra-orbital or of the infra-orbital nerve have been reported.[1] The only cases of this description, which I have seen in recent literature, are those reported by Dunn.[2] He gives the history of two attacks of amblyopia occurring in the same patient, following a contusion of the right and subsequently a contusion of the left supra-orbital nerve. Both attacks were apparently cut short by section of the injured nerve.

Whenever it is alleged that impairment of vision is due to injury of one of these nerves, the case should be subjected to especially careful scrutiny; for it is not intrinsically probable that amblyopia or amaurosis ever depends upon these comparatively simple lesions. If, after a contusion or other injury of the supra-orbital or the infra-orbital nerve, the patient complain that vision in the eye of the injured side has become defective, one of the following explanations of the phenomena may obtain,—viz., that the optic nerve has been injured by fracture of the orbital bones, or that the defect in the eye antedates the injury, or that the disturbance in the eye is a coincidence, not a consequence, of the traumatism; or that the patient is malingering. In the more obscure cases, judgment should be reserved until sufficient time have elapsed for the ophthalmoscopic signs of pathological changes in the fundus to become manifest. The appearance of such signs may be delayed.

Wounds of the Eyelids.

The eyelids may be the site of all sorts of wounds—incised, punctured, lacerated, and contused wounds. They may be either

[1] Mackenzie: "Dis. of the Eye," Philadelphia, 1855, p. 150 *et seq.*

[2] New York Med. Journal, August 9th, 1890; May 30th, 1891.

superficial or deep. The whole eyelid may be torn off, or so extensively lacerated as to slough away, leaving the cornea exposed to the atmosphere. They may be confined to the structures of the eyelids, or they may involve neighboring structures. They may be either infected or non-infected.

The course of the wound is important. When it is parallel, or nearly parallel, with the free margin of the lid, the scar will be less conspicuous and the deformity much less marked than if the wound were oblique or vertical. Incised wounds parallel with the free margin of the lid may heal without noticeable scar or deformity. When they pass through the levator palpebræ superioris, however, the patient will not be able to open his eye; he will suffer from *traumatic ptosis*. Careful suture of the divided muscle will restore its usefulness, but it may be anticipated that evidence of the traumatism, in the line of deformity or in restricted action of the muscle, will remain after the most skilful handling. The most favorable time for operation in such cases is immediately after the injury. Green made a successful operation two years after the muscle was divided.

A wound near the inner canthus may divide the canaliculi. Cicatricial tissue may occlude the lumen of the tube, causing epiphora, or weeping of the eye. Epiphora is an annoying condition that disturbs the function of the eye by virtue of accumulation of tears in the conjunctival sac.

Wounds parallel with and near the margin of the lids, passing through the tarsus in the region of the Meibomian ducts, will result in formation of cysts of the Meibomian glands, through cicatricial occlusion of their ducts.

Wounds dividing the eyelids in an oblique or a vertical direction will cause deformity. Incised wounds of the lid margin and tarsal cartilage, even though they may have been promptly and accurately united by a suture, may heal with permanent deformity (traumatic coloboma). The eyelashes about the wound may be turned toward the eyeball by the cicatrix, so that they constantly irritate the cornea. When this takes place, the patient is very uncomfortable; his eye may be constantly inflamed, and its function may be impaired by loss of transparency of the superficial strata of the cornea.

Lacerated and contused wounds resulting in loss of tissue are productive of greater evils. Such wounds, even when su-

perficial, will leave a noticeable scar, and, when the loss of tissue extends over a sufficient area, the cicatrix will prevent complete closure of the eye (lagophthalmus). In order that the lagophthalmus may be permanent, considerable loss of tissue is necessary, owing to the elasticity of the integument of the eyelids. Lacerated wounds having a vertical or an oblique direction are, more frequently than others, productive of lagophthalmus and coloboma. Lacerations of the eyelids may destroy sufficient tissue to uncover the cornea permanently. Unless relieved by surgical treatment, the eye will remain open. Sooner or later the drying effect of the atmosphere and the dust in the air, lodging upon its surface, will set up a persistent inflammation of the cornea, which will destroy the eye. The most successful treatment cannot efface the deformity.

Lacerated and contused wounds of the eyelids may be succeeded by eversion of the lid margins (traumatic ectropium). This is more commonly due to wounds of the lower than to those of the upper lid. The deformity is unsightly. When the inner portion of the lower lid is everted, the eye will weep constantly. Punctured wounds of the eyelids, when they extend into the orbit, may result in eversion of the lid margin, by virtue of cicatricial contraction.

Incised wounds of the eyelids heal promptly. Lacerated and contused wounds, when infected, or when they occur in persons whose health is depraved, heal slowly and usually suppurate. Such wounds may be attacked by erysipelas. This may endanger the patient's life, and it may extend to the orbital cellular tissue, causing atrophy of the optic nerve, or ulceration of the cornea. Under such conditions, the latter would run a very destructive course. Punctured wounds made by an infected instrument may be followed by similar results.

Burns of the Eye.

The eyelids may be burned by fire, by explosions, and by corrosive agents. The burns may be superficial or deep. They may totally destroy the eyelids. Burns of the first degree heal without leaving any trace behind. Deeper burns are followed by scarring; such scars contract so as to give the eyelids a false position. Thus, the several conditions, ectropium, even to com-

plete eversion of the eyelids and exposure of the cornea, lagophthalmus, and anchyloblepharon, may be caused by contraction of such cicatrices in the eyelids. The deformity is sometimes very repulsive. Operative interference will relieve that feature to a considerable extent, but well-marked traces of the casualty will persist in the more severe cases, notwithstanding the most skilful management.

Burns of the eyelids are associated, in many cases, with a more serious corrosion of the conjunctiva and eyeball. But burns of the latter may not be complicated by burns of the eyelids. Quicklime and acids (vitriol) are the corrosive agents that most frequently enter the eye. Flames from gunpowder and other quickly inflammable substances may scorch or severely burn the eyeball. Corrosion of the conjunctiva causes ulceration. When the palpebral and the opposing bulbar conjunctiva are involved in the same ulcerative process, symblepharon, or adhesion of the eyelid to the eyeball, ensues. Such adhesion may prove to be a serious impediment to the performance of the functions of the eye. Symblepharon may attain such degree that the palpebral conjunctiva is adherent to the cornea. When this is the case vision is very much impaired or destroyed.

Burns of the cornea may be either superficial or deep. A superficial burn may destroy the epithelial layer only. Such an example came under the writer's observation. Both corneæ of a boy were burned to this degree while he was examining a burning paper that contained gunpowder. The flame destroyed the whole epithelial layer of both corneæ. Both eyes recovered perfectly without a trace of the injury. Explosions of blasts and accidents with fire-arms are not uncommonly followed by burns of the cornea and lodgment of grains of powder therein. In general, the cornea recovers its transparency, notwithstanding the retention of the powder-grains in its substance. Burns of the cornea may be sufficiently deep to open the anterior chamber at once, or the ulceration following them may perforate the cornea subsequently. Such injuries destroy vision in the injured eye and lead to sympathetic inflammation of the fellow-eye. An example of the latter came under the writer's observation. The right eye of a man was corroded by quicklime. The anterior chamber was opened. Some years later, the eye appeared as if an iridectomy outward had been performed. The

uninjured eye was blind, owing to unmistakable sympathetic inflammation.

The dangers of burns of the cornea are, then: 1, immediate destruction of the eye by extensive corrosion; 2, in less severe cases, perforating ulcer of the cornea, leading sometimes to sympathetic inflammation; 3, cloudiness of the cornea, following ulceration or severe keratitis; and 4, symblepharon.

Burns of the sclera may destroy the eye by perforating the organ, when sympathetic disease may supervene and destroy its fellow; or by exciting violent inflammation of the uveal tract. They injure the usefulness of the organ in other cases, by virtue of the symblepharon, which almost invariably succeeds them.

CHAPTER V.

INJURIES AND WOUNDS OF THE EYEBALL.

Dislocation of the Eyeball.

The eyeball may be dislocated by blunt objects thrust into the orbit. "Gouging" is a practice which consists in thrusting a thumb or a finger into the victim's orbit between the eyeball and the bony wall. This forces the globe from its bed sufficiently for the eyelids to slip behind it. Injuries of this character may rupture one or more of the ocular muscles. They cause severe contusion of the eyeball, in a certain number of cases. While the eye is dislocated its vision is suspended, but normal vision may return when the dislocation is reduced. A prognosis of the ultimate effects of the injury, however, cannot be made early; for, subsequently, destructive inflammation may supervene. Hemorrhage into the vitreous, dislocation of the lens, detachment of the retina, rupture of the choroid, and rupture of the sclera occur as complications, which terminate the usefulness of the organ.

Dislocation of the eyeball may be due to blows upon the eye. Noyes relates a case caused by falling down-stairs and striking the head against the banister.[1] Prominent eyes in shallow sockets are more easily dislocated than others.

Dislocation of the eyeball into the maxillary antrum has been described. A remarkable case of this nature was observed by Langenbeck. The patient was struck on the right side of his face by a locomotive. Eight days later the eyeball was found projecting into the antrum, through the floor of the orbit. When replaced, it was found to be uninjured and its acuteness of vision normal. Four months after, an ulcer appeared in the cornea and the eye became shrunken.[2]

[1] "Dis. of Eye," 1890, p. 447.

[2] Archives of Ophthalmology, N. Y., vol. xxii., 1, abstract.

Evulsion of the Eyeball.

The eyeball may be torn from its socket by accident. Mackenzie[1] cites the following case: While intoxicated a man fell against the ring of a key which was in the lock of the door. The ring divided the upper eyelid and, penetrating into the orbit, scooped the eyeball out so that it fell upon the floor. The man, being too drunk to realize the extent of his injury, went to bed and was found in the morning covered with blood. Under simple treatment he made a speedy recovery.

Mackenzie refers also to a case in which the eyeball was torn from its socket by a cart-wheel passing over the side of the patient's head.[2]

Contusions of the Eyeball.

The damage accruing from contusions of the eyeball will vary with the amount of force and the direction of the blow. The bony margins of the orbit are arranged in a way to protect the globe against blows directed from points not immediately in front of the eye. Large blunt objects, like the clenched hand, striking point-blank, would generally be arrested by the bony margins of the orbit and cause only trifling, if any, injury to the eyeball. If, however, the eyeball were prominent and the orbit shallow, or if the assailant's knuckles were large, and if they were armed with a metallic reinforcement, a point-blank blow might cause a severe contusion, resulting even in rupture of the eyeball and destruction of the eye. Contusions of the globe are more likely to ensue from the impact of small blunt objects. They may be received at the hands of an adversary, who viciously attempts to gouge the eye from its bed.

Rupture of the sclera, due to contusion, is, almost without exception, observed in the anterior portion of the eyeball, passing through the ciliary region. Bowman reported one case of rupture of the posterior portion of the sclera. Ruptures of the sclera may be either partial or complete. They are more or less concentric with the cornea, and are found, as a rule, above the cornea. The rent in the sclera lies near the cornea, on the

[1] *Loc. cit.*, p. 417, from "Annales d'Oculistique," t. xxvi., p. 99.

[2] *Loc. cit.*, p. 417, from Graefe and Walther's Journal, vol. i.

side opposite to that receiving the contusing force. A blow from in front will rupture the sclera above the cornea; for the patient will roll his eyes upward instinctively to protect them from injury, and the blow will strike below the cornea. Blows delivered upon the upper and outer portion of the globe will rupture the sclera on the opposite side of the cornea—that is, downward and inward. Blows upon the temporal side of the cornea will rupture the sclera on the nasal side; and blows received above the cornea will rupture the sclera below the cornea, and *vice versa*.[1]

Large complete rents in the sclera are associated with loss of vitreous, collapse of the eyeball, and immediate destruction of the organ. Smaller complete ruptures may be complicated by prolapse of the iris, ciliary body, choroid, and vitreous, and by extrusion of the crystalline lens. At the same time, the conjunctiva is often torn, so that there is direct communication between the contents of the eyeball and the external world. When this occurs, the wound will generally become infected by micro-organisms; irido-cyclitis will follow, and may lead to an attack of sympathetic inflammation in the fellow-eye. Or, purulent panophthalmitis may invade the injured organ and destroy it.

The scleral rupture in other cases may exist without lesion of the conjunctiva. So long as the conjunctiva is not torn, the danger of infection by micro-organisms and the subsequent disasters supposed to be due to them is very much diminished.

Loss of vitreous, and prolapse of the iris and of the choroid, are always serious complications. Even a moderate loss of vitreous is sometimes followed by detachment of the retina. This may not supervene until some weeks or months have elapsed; that is, until the cicatrices which form in the chamber of the vitreous have begun to contract. It is possible for the patient to recover from the immediate effects of the injury with useful vision in the eye; but this may be destroyed subsequently by detachment of the retina. Attempts made to reduce prolapsed portions of the iris, ciliary body, or choroid, will not commonly prove entirely successful. Some incarceration of the stump of the abscised prolapsed structures will persist in the scar. It must follow, in most cases of that nature, when the cicatrices contract, that irritation, or a low

[1] Alt: Wiener med. Wochenschrift, 1874, pp. 230, 231.

grade of inflammation, will keep the eye tender and menacing to its fellow. The comfort of the patient will be seriously disturbed, the usefulness of both eyes greatly impaired, and, subsequently, an attack of sympathetic inflammation may cause blindness of both eyes.

Judged from the standpoint of the rupture alone, contusions of the eyeball sufficiently severe to produce such a lesion are among the most serious injuries that befall the eye.

Moreover, such contusions may cause hemorrhage into the anterior and the posterior chambers, and into the chamber of the vitreous; they may cause partial or complete luxation of the lens, or even extrusion of the lens from the eyeball; they may be complicated by irido-dialysis, or by retroversion of the iris, by rupture of the choroid or the retina, or by detachment of those structures; and they may be complicated by fracture of the walls of the orbit. An eye subjected to such an injury is, therefore, often destroyed at once.

Contusions of the Cornea.

The cornea may be contused by a force applied to the closed eyelids, or by one striking the cornea directly. Unless the blow is delivered with great velocity, the eyelids will close before the eyeball is struck. In this manner, the organ is protected in many instances against accidents that would otherwise produce serious results. Evidence of contusion of the eyelids will be present when the injury has been received by them.

Contusions of the cornea may be the cause of inflammation of that structure, and the inflammation may be superficial, or it may involve the deeper layers. The cornea will lose much of its transparency and vision may be considerably below normal. But complete resolution of the morbid process may be anticipated in most cases, under appropriate treatment.

When the blow of a blunt object falls directly upon the corneal tissue, an abrasion of the epithelium, or even a deeper wound, may be the result. Such solutions of continuity may ulcerate. Then destruction of tissue may be sufficient to ruin the eye. Abrasions of the cornea may heal without leaving a trace of their existence. They may be converted into ulcerations, if infective material come in contact with them. The sources of

such infection are commonly a purulent discharge from the conjunctiva, a purulent discharge from the lachrymal sac, a dirty body causing the contusion, rubbing the eye with dirty fingers or a dirty handkerchief, or carelessness on the part of the attending physician. Ulceration may appear first as an abrasion, and, without the intervention of infection, necrosis of the cornea may supervene in consequence of the violence of the blow. The corneal tissue, in such a case, is killed by the traumatism, and the dead part is separated and thrown off from the living by the process of ulceration.

Contused wounds of the cornea amounting to more than an abrasion of the epithelium heal by cicatrization. The tissue composing the scar is opaque. If the loss of substance extend over more than a very limited area, the scar will be a noticeable deformity. Sometimes small ulcerated spots heal without the development of opaque scar tissue. The spot appears, when healed, as a small pit or facet in the surface of the cornea, and it is apparently covered with epithelium as transparent as that which extends over the adjacent normal tissue. Delicate scars are developed from superficial ulcerations. They may be almost or quite invisible to the unpractised observer.

Whether these traces of the pre-existing loss of substance be marked or insignificant, their chief importance, as regards the function of the eye, depends upon the position occupied by them. When they invade the region through which the visual line should pass, they always impair the acuteness of vision. A large opaque scar located over the pupil will produce blindness. A delicate nebula in the same position will destroy reading vision. In such cases, loss of normal transparency of the cornea will explain the effect upon sight. When a facet of the cornea lies over the pupil, the acuteness of vision is also seriously impaired. For the surface of the cornea is no longer regular, and, in the affected region, the rays of light passing into the eye are irregularly refracted (irregular astigmatism). Hence the retina does not receive a perfectly formed image of the object looked at. Distortion of the retinal image in some of these cases is so marked that the usefulness of the eye is destroyed.

Eventually external strabismus may supervene, in consequence of disuse of the affected eye.

Inflammation, abscess, and ulceration of the cornea result-

ing from contusions are more prone to follow such injuries in patients who are old or badly nourished.[1]

Rupture of the cornea alone has been observed. De Wecker[2] refers to two cases that occurred in his own practice. In one, the lesion was due to a violent blow of the fist; in the other, it was due to gouging, the assailant's thumb being thrust between the inner wall of the orbit and the eyeball.

Contusions sufficiently forcible to rupture the cornea would, in most cases, cause other severe injuries of the eye. The rent may extend into the sclera, and would then involve the ciliary region. The iris would be prolapsed. The lens might be dislocated or even extruded. Rupture of the choroid, detachment of the retina, or loss of vitreous may also complicate the case.

Simple rupture of the cornea, in the most favorable cases, would endanger the preservation of the eyeball; for it is a penetrating injury. Iritis of a severe type may be expected. Purulent panophthalmitis may ensue, and removal of the eye become a necessity.

But, even though the rupture be uncomplicated by injury of other structures, and the healing be prompt and uneventful, the function of the eye will be seriously impaired or perhaps totally destroyed. For, in the first place, the line of union may cross the pupil and mechanically interfere with the passage of light into the eye; and, in the second place, the union will result in irregularity of the cornea, and, therefore, irregular astigmatism and its consequences.

Ruptures of the cornea, or of the cornea and sclera together, may be followed by chronic iritis or chronic irido-cyclitis. The eye will remain tender and irritable after the wounds have healed, and, subsequently, the fellow-eye may be invaded by an attack of sympathetic inflammation.

Affections of the Iris, due to Contusions of the Eyeball.

Contusions of the eyeball often separate the iris to a certain extent from its peripheral attachments. That condition is known as irido-dialysis—the iris retracts toward the pupil at

[1] Alt: Wiener med. Wochenschrift, 1874, p. 231.

[2] "Traité complet d'Ophthalmologie," 1886, p. 216.

the site of the detachment, thus forming an aperture by the corneal margin, through which the fundus-reflex may be seen, when the eye is illuminated with the ophthalmoscopic mirror. The aperture may be large enough to permit an ophthalmoscopic examination of the fundus through it. The pupil will not maintain its normal roundness, and does not respond properly to the stimulus of light. In fresh cases, blood will be found in the anterior chamber, but it soon undergoes resorption. Hemorrhage into the vitreous and traumatic cataract occur as the more common complications, together with transient loss of transparency of the cornea.

Cases are observed in which the eye is inflamed and painful for a number of months, especially when the contusion has injured the deeper structures, causing profuse hemorrhage into the vitreous. As a rule, however, all irritation subsides after a few days or a few weeks. Transparency of the media may become normal, with normal vision in the eye. A partial opacity in the posterior capsule of the lens, with diminished vision, occurred in two cases under my observation. The vitreous in both cases contained a few particles of extravasated blood, which soon disappeared, leaving the media clear in every part excepting the small area of the posterior capsule. One of these patients was injured nearly four years ago, but no extension of the area of opacity was visible at a recent examination. The eye had not been troublesome after the primary irritation subsided, although the boy had attended school regularly.

Irido-dialysis may be sufficiently marked to excite comment from casual observers. Its situation and size may cause monocular diplopia. Another patient was annoyed by this symptom, until he learned to disregard the false image. He can still see through the false pupil, however, by directing his attention to it. The glare of light may dazzle such eyes; for, owing to the imperfect movements of the pupil and the fault in the periphery of the iris, the eye receives more light than an uninjured eye. Vision may, also, be imperfect on dark days, by virtue of an imperfect dilation of the pupil.

Rents in the substance of the iris may be due to contusions. De Wecker[1] cites a case from Lawson, in which the rent occurred above and near the pupil. The appearance was that of a large

[1] "Graefe-Saemisch Handbuch," 4, p. 536.

pupil divided transversely by a narrow band of iris-fibres. Vision was quite imperfect. If vision through either aperture alone had been normal, it would, nevertheless, have been confused when both were uncovered. The force of a blow sufficient to cause a rent in the substance of the iris may be expected to injure other structures (lens, choroid, retina), so as to permanently depreciate the acuteness of vision, if not to destroy useful sight.

Severe contusions cause absolute dilatation of the pupil. Blows upon the eye may, rarely, produce either complete or partial retroversion of the iris. Complete retroversion resembles both absolute dilatation of the pupil, and absence of the iris. Partial retroversion resembles coloboma of the iris. Congenital coloboma always occurs downward, or downward and inward, and is generally binocular.[1] When the iris is retroverted in any case, ophthalmoscopic examination of the ciliary processes is not possible. This fact does not obtain in dilatation of the pupil, or in aniridia, or in coloboma. Traumatic and post-operative colobomata of the iris are associated with scarring of the cornea.

These conditions are permanent, almost without exception. An instance, however, of healing in a case of irido-dialysis following a "combined extraction" of cataract has come under my observation. Berry refers to a case of recovery, recorded from the Dublin Eye Hospital.[2]

Affections of the Crystalline Lens, due to Contusions of the Eyeball.

Traumatic Cataract.—Cataract may be the principal result of a contusion of the eyeball. Changes in the transparency of the lens may not be observed until weeks or months have passed. When the opacity begins, it generally becomes complete and reduces the visual power to perception of light. Evidence of the existence of any other lesion may be wanting. It is supposed that the anterior capsule is ruptured in most of the cases, and that cloudiness of the lens is due to the action of the aqueous humor, which is admitted to the lens tissue through the rent in the capsule. But in other instances the existence

[1] Berry: "Dis. of Eye," p. 270. [2] *Loc. cit.*, p. 269.

of a rent in the capsule cannot be made out. When the capsule is ruptured, the incipient stage of traumatic cataract ought to become visible in a few hours, or a few days. When the capsule is not ruptured, the cataractous degeneration of the lens ought to be developed much more tardily. At all events, after contusions of the eyeball, cataract may develop, whether the injury does or does not appear to be serious, when the patient is first examined. Liégey [1] reported such a case. A man was struck in the face with a whip-stock. The right side of the face, when the first examination occurred, was smeared with blood, which still flowed from a small, clean wound 1½ cm. long, situated at the base of the lower eyelid, but not penetrating to the bone. The lower eyelid was swollen and ecchymosed. The superior lid was slightly swollen and ecchymosed. The palpebral and bulbar conjunctiva was injected with blood; there was slight chemosis; media clear, fundus normal, as seen with the ophthalmoscope. Patient avowed that he could see light only. Liégey did not think that the eye had been seriously injured, and gave a favorable prognosis. About five weeks later the man returned to him saying that the eye was entirely blind. Iris was immobile and pupil dilated. No physical signs of the injury. Media still clear and fundus appeared normal. The diagnosis at this time was incomplete traumatic amaurosis, which may or may not continue and may become total. Two weeks later, no especial change had taken place. Five weeks after this visit Liégey examined the eye again and found signs of cataractous degeneration of the lens. The court allowed the plaintiff damages.

In every case, traumatic cataract permanently injures the eye. The cataract may be extracted, or its solution may be effected by operation. In either case, the images of objects may be formed upon the retina again, as soon as the obstruction is removed. But a cataract glass must be fitted to the eye in order that vision may be distinct. With glasses, however, the patient will not be able to adjust his eye for objects at variable distances. The power of accommodation is wanting; and the injured eye cannot work harmoniously with the sound eye. For this reason, patients soon abandon attempts to use both eyes again, for such attempts always prove abortive.

[1] Journal de Médecine, 1871, p. 496.

Traumatic cataract is a noticeable deformity. The white pupil attracts attention; and, therefore, it is a source of annoyance to the patient. Eventually, the injured eye turns outward; thus, divergent strabismus is added to the disfigurement already present. Operation upon these cataracts improves the appearance of the eye, and restores sufficient vision to improve slightly the sense of perspective, even without glasses. When the patient has only one eye, or when the fellow-eye does not retain sufficient visual power, operations on these cataracts will restore useful vision.

Traumatic cataracts may, in some cases, undergo complete solution, without operative interference. The pupil may thus become clear and black, and the eye may appear perfectly normal to the casual observer. In many cases, however, the solution is not complete, or the capsule of the lens subsequently becomes cloudy and the pupil remains white, or, after a variable period, becomes white, and the eye has an unsightly appearance. Operation (discission) will often clear the pupil in these cases.

Dislocation of the Lens.—Contusions of the eyeball may cause dislocation of the lens. The dislocation may be either partial or complete. The suspensory ligament, or zone of Zinn, is ruptured. The lens may be expelled from the eyeball and lodge under the conjunctiva, or it may be extruded from the eye altogether. Complete dislocation of the lens is spoken of as *luxation* of the lens; partial dislocation as *subluxation* of the lens.

Luxation of the Lens.—The lens may be dislocated into the vitreous, and will be found lying below the pupil. If the vitreous be fluid, the lens will change position when the eye or head is moved in certain directions. It may remain clear for some time, but will finally become opaque. After the primary irritation subsides, the eye may remain quiet during a number of years; or the eye may continue irritable and become very painful. This happened in the case of a patient who consulted me about eight months after the accident. She had attempted to break a stick of kindling-wood with an axe. The stick flew against her right eye, striking it with considerable force. Vision was immediately impaired. There was no laceration or other wound of the eye. Severe inflammation followed. The

eye continued painful for months, in spite of the treatment advised by her physician. Owing to excessive pain, she acquired the morphine habit. When I saw her, the eyeball was enlarged, hard, and tender to pressure. The pupil was semi-dilated. Ciliary staphylomata were present. The lens was dislocated downward into the vitreous. Vision was perception of light only. Her general health was very much shattered. The case was one of luxation of the lens, followed by secondary glaucoma. Enucleation was imperative.

The lens may be dislocated into the anterior chamber by contusions of the eyeball. The luxated lens appears transparent, like a drop of oil. By oblique illumination its peculiar structure may be discerned. The lens may remain clear for some weeks, but eventually it becomes opaque; in certain cases, opacity of the lens is noted soon after the injury. An opaque lens in the anterior chamber resembles in appearance a collection of thick pus. In every case vision is very much impaired.

A lens dislocated into the anterior chamber, and lying in contact with the cornea, will very often excite inflammation of that structure, which may terminate in a perforating ulceration of the cornea, expulsion of the lens, and *phthisis bulbi*. On the other hand, in some instances, a dislocated lens may lie in the anterior chamber for months without exciting much irritation. Very frequently, however, secondary glaucoma supervenes, causing excruciating distress. The lens may lodge in the pupil. When this occurs, secondary glaucoma is inevitable.

Dislocation of the lens under the conjunctiva occurs only when the tunics of the eyeball have been ruptured by the blow. Immediately after the injury the diagnosis may be obscured by the presence of extravasated blood. Subsequently, resorption of the blood will enable the attendant to detect the lens in its false position. A contusion which gives rise to such an injury as this must necessarily be a severe one.

Subluxation of the Lens.—Subluxation of the lens depends upon a partial rupture of the zone of Zinn. The free margin of the lens, when the zone is torn, may fall away from the iris, while the opposite edge of the lens advances toward the anterior chamber. Hence, the lens lies in an oblique position in the pupil. Such a condition will cause irregular lenticular

astigmatism. This is not always easy to diagnosticate. But it may be presumed to exist when, in an eye the refraction of which was previously known, irregular astigmatism is detected for the first time after an injury, the media being clear and the fundus normal. The ophthalmometer will assist in making the differential diagnosis between corneal and lenticular astigmatism. The depth of the anterior chamber will not be the same at all points, and the iris will be tremulous, where it is not supported by the lens. Glasses will not improve the vision much.

When tilting of the lens is more marked, its free margin may be seen in the pupillary space. So long as the lens remains clear the patient may complain of monocular diplopia.

Lateral, or vertical, displacement of the lens is revealed by the presence of the margin of the lens in the pupillary space: it appears as a dark crescentic line. When the lens is displaced, the iris is no longer supported and trembles when the eye is moved quickly. The power of accommodation is wanting; and while the lens remains clear and its edge passes through the pupillary space, the patient may complain of monocular diplopia.

Monocular diplopia exists in these cases because the light entering the pupil passes in part through the lens and in part through the space from which the lens has moved. The rays of light passing through these two regions will be refracted differently, and two imperfect images of the same object will be formed upon different portions of the retina at the same time. Both images may be perceived by the patient. On account of this, the usefulness of the eye will be destroyed, unless the patient learn to suppress the less distinct image.

Subluxation ends sooner or later in complete dislocation. In time, the lens becomes cataractous. And, owing to the changes of position which some of these lenses undergo when the conditions are favorable, the eye may be irritated and cyclitis, choroiditis, or secondary glaucoma may supervene to destroy the eye definitively.

Dislocation of the lens of any sort always permanently injures the function of the eye. Nothing can be done to restore the lens to its normal position, nor is it possible to prevent the cataractous degeneration that is certain to ensue sooner or later.

When the eye becomes irritable, or when cyclitis, choroiditis, or secondary glaucoma develops, in a certain number of cases, the lens may be removed, and the necessity for enucleation of the eyeball obviated. Operations upon these lenses are most difficult when the dislocation is into the vitreous. In every case, the operation is a delicate one. It is least difficult when the lens lies under the conjunctiva. Glasses may improve the vision very much, but the disparity between the eyes (supposing the fellow-organ to have ordinary visual power), is such that, in general, patients are not as comfortable with as without them. A dislocated lens may excite irido-cyclitis, and some ophthalmologists believe that it is one cause of sympathetic inflammation.

Not all dislocations of the crystalline lens are traumatic. Congenital dislocation, or *ectopia lentis*, is a well-known deformity of the eye. In such cases both eyes are affected, and generally the lenses are partially dislocated in an upward and outward direction. Such lenses are smaller than normal. The anomaly is symmetrical.[1] "*Ectopia lentis* occurs mostly upward, or upward and inward, and upward and outward. It is often met with in several members of the same family, and is hereditary. . . . It probably always occurs in both eyes and is frequently associated with a defect in the power of convergence."[2] According to De Schweinitz, "complete congenital luxation is also described."[3]

Spontaneous dislocation of the lens into the anterior chamber or into the vitreous may occur, especially in cases of fluid vitreous, in myopia of high degree, and in cases of choroiditis. Hypermature cataracts may become spontaneously dislocated.

I have observed a case of subluxation of the lens, toward the nasal side into the chamber of the vitreous, in an eye which had been destroyed years before by a burn of the cornea. The cornea had been perforated, the iris had prolapsed, the pupil was irregular and presented the appearance which a large iridectomy would leave. There was absolutely no history of contusion of the eyeball. No operation had been performed upon the eye.

[1] Becker: "Graefe-Saemisch Handbuch," 5, p. 286.

[2] Berry: "Dis. of Eye," 1893, pp. 180, 181.

[3] "Dis. of Eye," p. 402.

Rupture of the Choroid and Detachment of the Retina.

Profuse hemorrhage into the vitreous arises from severe contusions of the eyeball. Until resorption of the blood has taken place, it is not possible to examine the fundus. When the media have become clear, a rupture of the choroid, or a detachment of the retina may be found. Ruptures of the choroid are situated between the macula and the optic disc, and are more or less concentric with the latter. They appear at first as a yellowish stripe, sometimes branched, becoming pale later on, with pigment deposits along the margins. Choroidal rupture has been observed near the equator of the eyeball.

Vision is commonly very much disturbed: in rare cases the eye may still retain useful vision. After resorption of the blood has become complete and the eye has become perfectly quiet, no further improvement in function may be expected.

Traumatic detachment of the retina may be diagnosticated only after the extravasation has been resorbed. It may be partial or complete. Partial detachments become complete sooner or later. The lesion is most easily produced in myopic eyes. The ophthalmoscopic appearances are characteristic. Useful vision is permanently destroyed in every case.

WOUNDS OF THE EYEBALL.

Wounds of the eyeball may be incised, punctured, lacerated, or contused. Lacerated and contused wounds differ from others especially in that the injured tissues are so torn and bruised that primary union is not possible, healing is prolonged, and danger of infection is correspondingly increased. Moreover, inasmuch as they are due to impact of blunt weapons, the force required to produce them is sufficient to cause a contusion, as well as a laceration of the eyeball.

Wounds of the eyeball may be infected or non-infected: that is to say, some wounds are contaminated by pathogenic microbes, and others are not. Such contamination may be due to an unclean instrument or weapon, to a pre-existing purulent inflammation of the conjunctiva, or the lachrymal sac, or to carelessness on the part of the patient or his attending physi-

cian. Non-infected, or aseptic, wounds heal with little or no inflammatory reaction, provided that close apposition of their edges may be maintained. Infected, or septic, wounds, even though trifling in appearance, heal slowly, and the consecutive inflammation often invades the whole eye and destroys it. Disinfection of wounds of the eyeball is much less readily accomplished than is the case with wounds of other parts of the body. Strong antiseptic solutions irritate the delicate structures of that organ and may seriously injure them. Moreover, the deeper parts of the wound are comparatively inaccessible. Hence it follows, that when infection of these lesions occurs, the consequences of them are much more disastrous than the nature of the injury would, at first sight, appear to warrant.

Wounds of the Cornea.

Wounds of the cornea may be either superficial or perforating. Perforating wounds open the anterior chamber. Wounds of the cornea heal by the formation of an opaque cicatrix. The cicatrix of an incised or a punctured wound is much less noticeable than that of a lacerated or a contused wound having the same linear measurement.

Both superficial and perforating wounds of the cornea cause distortion of its surface, resulting in irregular astigmatism, which may be only partially corrected by glasses. Vision is permanently impaired. The function of the eye is more disturbed when the cicatrix crosses the pupil than when it does not. In the former case, vision is impaired by the opaque scar and by the irregular astigmatism; in the latter, the uncorrectable astigmatism is responsible for the disturbance of sight.

Perforating wounds of the cornea, moreover, are frequently complicated by prolapse of the iris, which is washed into the wound by the flood of outpouring aqueous humor. Speaking generally, loss of the aqueous is not a serious accident, for it is reproduced within twenty-four hours. Sudden loss of a volume of aqueous, however, through a large wound in the cornea, may be followed by dislocation of the crystalline lens into the anterior chamber. Prolapsed iris commonly heals in the scar (anterior synechia), and the pupil is distorted. Dilatation and contraction of such pupils go on under the varying intensities

of light, and dragging upon the adhesion is the consequence. In many cases, this irritates the eye and may excite sympathetic irritation, or sympathetic inflammation. Or, if sympathetic disease be due to transmission of microbes, the entrance of the pathogenic germs into the exciting eye may be facilitated by the presence of iris-tissue in the corneal wound.

Wounds of the cornea may be so destructive in themselves that enucleation of the eyeball should be performed at once. And when they are followed by plastic irido-cyclitis, removal of the eye may be indicated to terminate the patient's suffering and to prevent an outbreak of sympathetic inflammation.

Wounds of the Ciliary Body.

Penetrating wounds of the eyeball, involving the circumcorneal zone, injure the ciliary body. When the wound is large, prolapse of the ciliary body may follow. This is always a serious complication; for it is not always advisable to abscise the prolapsed tissues, and incarceration of the ciliary body in the scar will rarely fail to excite a persistent cyclitis which will endanger the fellow-eye. Wounds of the ciliary body are universally regarded as among the most serious, if not actually the most dangerous, injuries that befall the eye. Even when the wound is aseptic and the healing is prompt, subsequent contraction of the scar is likely to result in chronic irritation, with great disturbance of vision, and may become the exciting cause of sympathetic disease. Septic wounds in this region are followed by violent inflammation, suppuration in the vitreous, and loss of the eyeball; or they may be followed by a less severe attack of cyclitis, which runs a chronic course, eventually blinding the eye and possibly exciting sympathetic disease. Profuse hemorrhage into the vitreous may occur with wounds of the ciliary body.

Wounds of the Lens.

Penetrating wounds frequently injure the crystalline lens or its capsule. Contused and lacerated wounds may be complicated by dislocation, or by extrusion, of the lens. When the capsule or the lens tissue is wounded, traumatic cataract subsequently develops. In the great majority of cases, the anterior

capsule is injured,—then the aqueous humor is admitted to the lens tissue. The lens becomes opaque, and, if the wound in the capsule do not heal too rapidly, solution of its tissue is effected by the aqueous. Solution of the lens may be complete after several weeks, when the pupil will become black and clear; or the solution may be incomplete, when opaque lens tissue will give a white appearance to the pupil and obstruct the passage of light. In the former set of cases, evidence of the lesion is not obvious to the casual observer, provided that the corneal wound have healed, leaving a narrow linear cicatrix. Subsequently the capsule, which remains unabsorbed, may become opaque and white. After complete solution of the traumatic cataract, before opacity of the capsule sets in, vision of the eye may be normal with proper lenses. But, power of accommodation is wanting in such eyes, the sense of perspective is impaired, the eyes cannot work harmoniously, and the patient is not able to perform work requiring correct binocular vision. When the rent in the capsule is large and the substance of the lens is much torn, it may swell so rapidly as to fill the anterior chamber; severe iritis may then set in, or secondary glaucoma may destroy the sight of the eye permanently. If solution of the lens be partial, or if, after complete solution, the capsule become opaque, vision is very much impaired, and the appearance of the eye is not pleasing. Divergent strabismus usually supervenes after a few weeks or a few months.

Wounds of the Iris.

Wounds of the cornea and wounds of the lens may be complicated by wounds of the iris. Hemorrhage into the anterior and the posterior chambers occurs at once, and may fill those chambers so that inspection of the structures behind the cornea cannot be made. Resorption of blood in the anterior or the posterior chamber takes place in a few days or a few weeks. The wound may have excited such an attack of plastic iritis that when the transparency of the aqueous is restored, the pupil may be found closed by an organized exudate. Plastic iritis and occlusion of the pupil are the great dangers to be met in wounds of the iris. Exclusion of the pupil (complete attachment of the margin of the pupil to the anterior cap-

sule of the lens) may supervene. This condition, as well as occlusion of the pupil, is productive of secondary glaucoma, unless relieved by a successful iridectomy. Naturally, septic wounds of the iris are followed by greater reaction than are aseptic wounds. The inflammatory reaction in the latter may be trifling; in the former, it will be intense and will extend to other portions of the uveal tract, viz., the ciliary body and the choroid.

Wounds of the Eyeball Opening the Chamber of the Vitreous.

Penetrating wounds of the eyeball may open the chamber of the vitreous and allow more or less of that tissue to escape. Loss of a small amount of vitreous may not prove harmful. Greater losses are followed eventually by detachment of the retina and blindness. When large losses of vitreous occur, the globe collapses and the eye is immediately destroyed. Prolapse of vitreous will be greatest, other things being equal, when the wound in the sclera runs at right angles to an antero-posterior meridian of the eyeball. Such wounds gape more than others and heal more slowly on that account. Profuse hemorrhage into the vitreous may occur in such injuries, and may destroy the visual power of the eye. Aseptic wounds entering the vitreous and parallel with the antero-posterior meridian of the globe, even when they are not trifling in extent, may not be complicated by dangerous prolapse of vitreous or profuse hemorrhage, and they may heal kindly, leaving the eye in a condition of usefulness. But, in general, such large wounds let out so much vitreous, cause so great intra-ocular hemorrhage, and injure the choroid and retina to such an extent, that the visual power of the eye is lost, although in some cases the eyeball may be preserved. Such eyes, however, generally become shrunken after a few weeks, or a few months. Septic wounds of the vitreous, both small and large, are followed by suppurative inflammation. Then the patient's suffering may be severe. Unrelieved by surgical interference, the ocular inflammation may possibly threaten his life by extending to the brain. Enucleation of eyes which were the seat of suppurative panophthalmitis has been followed by metastatic meningitis and death. Such eyes may be eviscerated without incurring such risks.

CHAPTER VI.

FOREIGN BODIES IN THE EYES.

Foreign bodies in great variety effect a lodgment in the eye. They may enter in consequence of an accident, or they may be introduced by an adversary, or, in rare cases, the patient may introduce them into his own eye. In the last set of cases, introduction of foreign bodies into an eye by the patient is the product of a desire to keep up an irritation of the organ for the purpose of gain, or of an hysterical condition of the nervous system that thrives upon the interest and sympathy which the "peculiar" case excites. Foreign bodies may traverse the eyelid on their way to the eyeball, or they enter through the palpebral slit. They may reach the eyeball after traversing one of the bony walls of the orbit. In gunshot wounds, splinters of bone may be forced into the eyeball.

Foreign Bodies in the Eyelids.

When the foreign body is diminutive, the wound of entrance may be so small that the existence of a *corpus alienum* in the eyelid may not be suspected. Even a moderately large fragment of metal may lodge in the eyelid without making a wound sufficient to attract much attention, if the wound of entrance be linear and parallel to the margin of the eyelids, and, especially, if several days have elapsed before the wound is carefully examined.

Lodgment of foreign bodies in the eyelids may result in abscess, after which cicatricial contraction may lead to deformity of the lid. Occasionally, a foreign body remains quiescent in the eyelid for a number of years, possibly becoming encapsulated, and does not excite any further reaction, or occasion any symptoms whatever. A body which has been lodged in this way for a long time may, for one reason or another, set up an attack of inflammation in the eyelid, and be eventually extruded from

the tissues altogether. Septic bodies cause suppurative inflammation, which may be followed by an attack of erysipelas, unless the offending substance be removed and the wound be thoroughly disinfected. Erysipelatous inflammation of the eyelids may extend to the orbital cellular tissue. Notwithstanding the indication that a septic foreign body is lodged in the eyelid which is given by the history of the injury and the symptoms immediately following, it is not possible to locate and remove the foreign body in every case. It is even possible that a comparatively large body may escape detection, especially when it is lodged in a swollen eyelid.

A foreign body may lodge in the eyelid in such position that it perforates the conjunctival surface and irritates the eyeball. It is conceivable that in such a case the swollen conjunctiva may envelop and conceal the foreign body. A severe grade of inflammation of the globe would doubtless ensue. Sooner or later the foreign body will be expelled, and then the inflammation subsides.

Foreign Bodies in the Conjunctiva.

Foreign bodies frequently lodge in the bulbar or palpebral conjunctiva. A favorite site for them is the under surface of the superior eyelid. Minute particles of metal are not readily discovered. And even large bodies lodged in the superior retrotarsal fold are sometimes found only after prolonged search. A foreign body in the conjunctiva excites inflammation. It may scratch the cornea, and, unless removed, set up a keratitis. The conjunctiva becomes swollen and may enclose the body and conceal it from discovery. As a rule, the offending substance is extruded from the conjunctival sac after a longer or shorter period of inflammation. In some instances, encapsulation occurs, or the foreign body remains lodged in the mucous membrane without exciting any secondary reaction. The latter is observed most frequently in case of powder-grains blown into the eye.

Foreign Bodies in the Cornea.

Foreign bodies may lodge in any part of the cornea; they may be imbedded in the superficial layers, or they may lie in

the deeper layers, and they may project into the anterior chamber. Large bodies may lacerate the cornea so extensively that vision is destroyed by the resulting cicatrix, the appearance of which is not pleasing. Small bodies, unless very superficially imbedded, leave a small scar. When the epithelial layer only is wounded, healing will not leave a scar. Minute scars in the cornea are most certainly detected by oblique illumination. The location of them is important; for when they lie in that region of the cornea through which the visual line passes, irremediable dimness of vision will be noted; whereas, if they be laterally located, they do no harm whatever. If small bodies in the epithelial layers even of the cornea are not removed promptly, inflammation with ulceration is most likely to ensue, and the resultant cicatrix is correspondingly increased in size. This will hold true in the case of more deeply imbedded bodies. A minute septic foreign body, even though very superficially lodged in the cornea, excites destructive ulceration, leading to loss of the eye, by perforation of the cornea, or by the presence of a large cicatrix formed in the process of repair.

Deeply imbedded foreign bodies excite inflammatory reactions and lead to results similar to those already mentioned. Septic bodies deeply lodged excite very serious inflammation, which may extend to the uveal tract. Hypopyon, plastic iritis, and even cyclitis may follow in the train of such injuries. The offending substance may work its way to the surface and be extruded, or it may ulcerate through the posterior layers and drop into the anterior chamber. The latter event is a decisive catastrophe.

In certain uncommon cases, the corneal wound may close over the foreign body which may remain imbedded, either encapsulated or not, without exciting secondary reaction, through a period of years. But it is not uncommon to observe powder-grains in the cornea which have been lodged there many years without causing any irritation.

The presence of a foreign body in the cornea is not always easy to detect. This is true of the following sets of cases: those appearing for examination after an intense keratitis has set in; those in which awkward and unsuccessful attempts have been made to extract the foreign body; those in which the foreign body has lodged deeply, and the adjacent cornea has become

opaque. Under such circumstances it may be impossible to detect the foreign body. But the attending physician should assume that a *corpus alienum* has lodged in the eye, whether he can find it or not, provided that the circumstances under which the accident occurred, together with the symptoms observed in the case, create a strong probability that a missile has entered the eye.

Foreign bodies in the cornea should be removed as soon as possible. Fragments of metal often enter the cornea in a heated state. The only disadvantage arising from this circumstance is that they adhere very firmly to their bed, and are therefore more difficult of removal. Deeply lodged bodies may drop into the anterior chamber during attempts to extract them. The eyeball must then be opened. Vegetable substances may be broken during attempts to extract them, and a small fragment be retained in the eye undetected. In still other cases, it may not be possible to remove the foreign body from the cornea.

Foreign Bodies in the Iris, the Anterior and the Posterior Chamber, and in the Ciliary Body.

Foreign bodies obtain access to the iris by passing through the cornea, or by penetrating the deeper regions behind the iris. As a rule, they enter through the cornea. They may lodge at any point on the surface of the iris; they may penetrate its tissues, they may perforate the iris and pass on to the lens or the ciliary body. The propulsive force may drive the body so that it simply impinges upon the anterior surface of the iris, from which it falls into the anterior chamber; or the force drives the body through the iris and it falls into the posterior chamber, where it may lie so as to persistently irritate the ciliary processes.

Aseptic foreign bodies may lodge in the iris or in the anterior or the posterior chamber, and remain there without doing much, if any harm, provided that they are of small size and their chemical composition is not deleterious. Small particles of iron or glass, in especial, may lodge in this way. They may become encapsulated. But these cases are exceptional. Septic bodies lodged in these regions excite violent suppurative iridocyclitis, which will prove fatal to the eye, and endanger its

fellow. Whether the foreign body be septic or aseptic, the mechanical injury to the iris may be followed by plastic iritis, resulting in a more or less permanent injury to the eye.

Foreign bodies in the iris, or the anterior chamber, are, as a rule, open to detection in recent injuries, unless considerable effusion of blood into the anterior chamber have occurred. After inflammation has set in, cloudiness of the cornea, swelling and discoloration of the iris, turbidity of the aqueous humor, a collection of blood or pus in the anterior chamber, may so obscure the view that the foreign body may not be found. A probable diagnosis of the presence of a foreign body in these regions of the eye may be based upon the history of the injury, the existence of a perforating wound of the cornea, the presence of blood or pus in the anterior chamber, irregularity of the pupil, and the existence of synechiæ, especially anterior synechia. It should be assumed that a foreign body has entered these regions, if the probability is strong that one has so entered. A few eyes may be sacrificed, perhaps, unnecessarily, by adhering to such a rule of action; but the danger of subsequent sympathetic disease and total blindness is sufficient reason for keeping on the safest side in all cases.

Mauthner[1] cites the following experience, which illustrates very forcibly the obscurity which enshrouds some of these injuries: "The patient had severely wounded his right eye while discharging a musket. He avowed with the utmost confidence that no foreign body was lodged in the eye. But it was evident that a perforation, located in the centre of the cornea, had been made by a bit of an exploded percussion-cap. Had the fragment rebounded from the capsule of the lens, or had it, perchance, penetrated the lens itself? These points could not be then determined, for a large amount of pus occupied the anterior chamber and concealed the pupil. The iris was prolapsed into a puncture, which had been made in the lower border of the cornea for the purpose of evacuating the pus. It was in this condition that I first saw the patient. It was impossible, at that time, to decide whether the purulent masses which still occupied the pupil were nodules of exudation upon the anterior capsule, or were swollen and suppurating fragments of the wounded lens; the latter condition, however, seemed the more

[1] "Sympath. Dis. of Eye," pp. 18, 19, 20.

probable. Nevertheless, the pus gradually disappeared, and although the pupillary border of the iris was found extensively adherent to the anterior capsule, neither the latter nor the lens had been wounded. The eye continued to improve, but, along with some lachrymation and pain, a slight conjunctival injection persisted around the dark-colored spot where the iris had prolapsed. One day, while examining the eye more carefully, in order to discover the cause of the obstinate irritation, I noticed that the dark, prolapsed iris had a distinct metallic lustre, so that I at once suspected the presence of a piece of metal. With a pair of fine forceps I extracted, from a small excavation in the corneal edge of the sclerotica, where it lay imbedded, a rolled-up piece of copper cap, 4 mm. long and $2\frac{1}{2}$ mm. wide. All the signs of irritation now disappeared in a short time. A fortunate accident had saved the wounded eye and its mate. The piece of metal had penetrated the cornea, struck the anterior capsule of the lens without opening it, and had then rebounded to the bottom of the posterior chamber, where it lay directly upon the ciliary body and excited a severe inflammation of the whole anterior part of the eyeball. The puncture of the cornea which had been made for the removal of pus from the anterior chamber having luckily been unskilfully performed, a portion of the iris fell through the incision, and into the pocket-like duplication thus made the piece of metal was received. After necrosis of the prolapsed iris the metal lay freely exposed at the edge of the cornea. Had the operation been made according to rule the iris would not have prolapsed, and the foreign body left within the globe would, in all probability, have produced a dangerous cyclitis, with the chance of involving the second eye."

Disappearance, by chemical action, of small particles of iron, and copper, which had lodged in the iris, has been reported. Such occurrences, and also examples of encapsulation or of innocuous lodgment of foreign bodies in the iris, or anterior chamber, are observed so exceptionally, the onset of dangerous iridocyclitis being quite common to these injuries, it follows that the only safe rule to adopt for the management of the cases is to remove the foreign body as soon as possible. In the great majority of cases, so long as a foreign body remains lodged in the anterior chamber, the iris, the posterior chamber, or the ciliary body, so long is the eye in a dangerous state, both as

regards its own integrity, as well as that of its fellow, by virtue of the pathogenic, the mechanical, or the chemical influences exerted by the foreign body. No certainty exists, in any case, that an encapsulated foreign body will always be innocuous. It may subsequently excite a violent secondary reaction, precluding the possibility of saving the vision of either eye.

Foreign bodies enter the ciliary body through the cornea and iris, or through the sclera. In the most common cases, the wound of entrance is near the sclero-corneal junction. As a rule, severe cyclitis immediately supervenes. The inflammatory process extends forward to the iris and backward to the choroid. Suppuration may occur in the vitreous. The dangers incident to wounds of the ciliary body, referred to in a preceding section, are intensified when the injury is complicated by lodgment of a foreign body in that region. Unless removed, the foreign body in the ciliary region will almost certainly destroy the eye and excite a fatal sympathetic inflammation in the uninjured eye. After removal of the foreign body, the eye may become quiescent and remain so, or a chronic cyclitis may persist and obstinately threaten the fellow-eye, while it destroys the usefulness of the injured organ. A foreign body lodged in the ciliary region may, however, in very rare cases, remain there, doing comparatively little harm, after the primary reaction has subsided. Years afterward, relapses of the cyclitis may set in and the foreign body be expelled. After this has occurred, the eye may remain quiescent for the remainder of the patient's life, or relapses of cyclitis may recur, owing to the irritation incident to contraction of the cicatrices, and sympathetic inflammation may eventually break out in the sound eye.

Foreign Bodies in the Crystalline Lens.

The lens may be invaded from in front or from behind. The foreign body, in nearly all cases, penetrates the cornea before striking the lens. It may, or may not, wound the iris. It may lodge near the anterior capsule, or it may penetrate more deeply into the substance of the lens. Foreign bodies entering the lens from any direction wound the capsule. Either the aqueous or the vitreous then comes in contact with the lens tissue,

and a traumatic cataract will be developed. Lesions of the anterior capsule admit the aqueous humor to the lens. When the rent in the capsule is small, it may heal promptly, leaving the foreign body imbedded in the traumatic cataract, where it may remain for years without originating further irritation. Vision is obscured by the cataract. Large rents in the anterior capsule do not heal quickly enough to prevent solution of the cortex of the lens by the aqueous humor. The cases run the same course as that already described for wounds of the lens. When solution has advanced a certain stage, the foreign body may become loose in the capsule and excite a persistent irritation, leading to irido-cyclitis, and, possibly, sympathetic ophthalmia; or the foreign body may still be firmly attached in such position that it does not irritate the eye. As solution of the cataract progresses, vision of the eye improves, until eventually the media may be clear again, leaving the sight good with cataract glasses. The usefulness of the organ is impaired, however, as explained when discussing wounds of the lens.

It may be predicted as true of nearly all cases that small fragments of metal or stone lodged in a lens, which becomes cataractous but does not undergo solution, will remain imbedded for many years, without exciting secondary irritation of the eye and without predisposing to sympathetic inflammation. Bodies in a septic state, however, will excite suppuration and its attendant dangers. Whenever, therefore, a small fragment of metal has entered the lens, the eye may be kept under observation for a time before any surgical interference is undertaken. This is especially applicable to cases injured by fragments of iron, copper, stone, or glass, the temperature of which had been elevated immediately before entering the eye; for the elevation of temperature will more or less completely disinfect the foreign body. Should the primary irritation be moderate in severity and show a tendency to subside promptly, the foreign body may be allowed to remain in the eye. It may be extracted subsequently with the cataractous lens, if secondary irritation supervene, or if the patient desire the operation for cosmetic effect. If, however, the primary irritation become severe and threaten the eye by irido-cyclitis, an attempt must be made to remove the offending substance, lest the inflammatory reaction advance beyond control. Panophthalmitis and loss of the eyeball may

result, and the danger of sympathetic ophthalmia must be kept constantly in mind.

Larger bodies cause larger rents in the capsule, through which the aqueous reaches the lens and may cause so rapid swelling of it that iritis, or secondary glaucoma, may supervene. Moreover, such bodies excite greater reaction in the eye by virtue of mechanical irritation and the septic material borne into the eye by them. It may be possible to combat such conditions successfully, and the foreign body may become encapsulated in such a position that secondary irritation may not arise. But, while attempts are being made to attain this result, the patient is exposed to a greater danger than that incident to an operation for the removal of the foreign body. No guarantee may be given that the foreign body will become encapsulated; it is much more probable that it will sink into the ciliary region and cause a very dangerous irido-cyclitis, or it may fall into the vitreous and set up inflammation there. In either contingency, an outbreak of sympathetic ophthalmia may be anticipated. On the whole, therefore, extraction of such large bodies should be undertaken at the very beginning. Removal of the foreign body may not be accomplished in some cases, even by competent ophthalmic surgeons. Then the question of enucleation of the eyeball must be entertained.

Foreign Bodies in the Vitreous.

A foreign body may penetrate the cornea with sufficient force to pass on through the iris and lens into the vitreous. More frequently, foreign bodies enter the vitreous by perforating the sclera. When they pass through the circum-corneal zone, in their transit to the vitreous, they must penetrate the ciliary body. Foreign bodies may lodge in the scleral wound or in the ciliary body. They may have been propelled by a force just sufficient to drive them through the tunics of the eyeball (sclera, choroid, retina), when they will drop into the vitreous; or they may traverse the vitreous, impinge upon the opposite side and drop back, and sink to the bottom of the eye. Or, they may become imbedded in the retina, choroid, or sclera, on the opposite side of the eye. Cases showing that foreign bodies may be imbedded in the optic disc are on record. A

foreign body (*e.g.*, bird-shot) may perforate the eyeball and lodge in the tissues of the orbit. Splinters of wood, thorns, etc., may transfix the eyeball.

When a foreign body enters the vitreous by way of the cornea, the danger incident to the presence of the body in the vitreous is complicated by the perforating wound of the cornea, iris,[1] lens, and probably of the ciliary body. Other things being equal, such lesions are the most dangerous of this class of injuries.

When a foreign body enters the vitreous by way of the ciliary region, the case is complicated by wound of the ciliary body, often resulting in a destructive inflammation of the whole uveal tract.

The simplest cases of entrance of foreign bodies into the vitreous are those not complicated by traumatism of the ciliary body, lens, iris, or cornea. In these simpler lesions, much depends upon the size of the foreign body. Large fragments of stone, metal, glass, etc., rend the sclera so widely that a large prolapse of vitreous takes place immediately, the eye will fill with blood, and these two effects suffice to destroy the eye at once. The presence of a large body in the vitreous will mechanically excite so much inflammation that no hope may be entertained of preserving the function of the eye. Smaller bodies may enter the vitreous after slitting the sclera by striking it in an oblique direction and cause a fatal prolapse of vitreous.

Even large bodies may lodge in the vitreous chamber, and after the initial inflammation has subsided, the shrunken and useless globe may remain free from irritation for a number of years. Eventually, however, the inflammation will recur, and may subside again. Such recurrent inflammatory outbreaks will be noted from time to time until eventually the other eye may be sympathetically diseased. The resulting blindness will then be a consequence of an injury sustained many years before. In some cases, the eyeball opens during one of the relapses of inflammation, and the foreign body is expelled, thus greatly diminishing the danger of sympathetic disease. Fragments of glass seem to be better tolerated in the vitreous chamber than other large foreign bodies.

[1] Iris may escape injury.

Small particles of metal entering the vitreous may lodge in the retina, choroid, or optic nerve. They may fall to the bottom of the eye, where they may become encapsulated. They may lodge in the retina, choroid, or nerve, where they may become encapsulated, or they may not. It is not a very uncommon experience to observe small particles of metal lodged in the retina or choroid (apparently not encapsulated), which have remained in the eye for a number of years without destroying the usefulness of the organ and without endangering the fellow-eye.

In Hirschberg's Clinic, the writer saw a patient in whose retina a fragment of iron could be seen perfectly distinctly with the ophthalmoscope; the iron had entered the eye twenty years earlier and had neither destroyed vision, nor endangered the fellow-eye since the primary effects of the injury had subsided. Since then I have seen cases of a similar nature. One of them was a man whose right eye was useless, owing to a wound of the cornea received when he was a child. While driving nails, a fragment of iron penetrated his sound eye. The fragment made a very small wound in the conjunctiva and sclera about one centimetre from the nasal margin of the cornea. Vision was much blurred by hemorrhage into the vitreous. About one week after the accident he came under my observation. The track of the missile through the anterior portion of the vitreous was then visible; but the position of the missile could not be located. Subsequently, however, the vitreous cleared up and the fragment of iron was seen lodged in the retina below the optic nerve. Inflammatory reaction subsided in a few weeks, and the patient returned to work, with glasses for his hypermetropia and as a protection against further accident. Three years later, he called to inquire about his glasses. The fragment of iron was still in the retina, but appeared to be smaller. It had not given him any trouble, and he had worked as usual. He was enjoined to return if the eye troubled him. I have not seen him since, five years after the injury. Recently I have seen another case in which a fragment of iron or steel has been lodged in the retina for seven years (after perforating the sclera), without injuring the usefulness of the eye. The missile is still readily detected with the ophthalmoscope.

The favorable course observed in cases of this nature is dependent upon the following conditions, namely: The small size

of the foreign body, freedom from septic infection, the comparatively trifling hemorrhage into the vitreous, fixation of the missile, and the material of which it is composed. Attention has been directed to the effect that may be expected when large bodies enter the eye. Small foreign bodies generally make small wounds; prolapse of vitreous, therefore, either does not occur, or it is very trifling in amount. Other things being equal, small bodies are less likely to carry septic infection than large bodies. In a large number of cases, the small foreign body is a fragment of iron or steel, the temperature of which had been raised immediately before it entered the eye. Such missiles are aseptic, or nearly so. Missiles, such as bird-shot and heated fragments of glass are likewise aseptic. Particles of copper may enter the eye in an aseptic state. But fragments of stone and vegetable substances, for example, twigs, pieces of bark, etc., are never in an aseptic condition. Not all particles of iron or steel, or glass, or copper, or gunshot missiles enter the eye in an aseptic state. When they carry septic infection into the vitreous, suppurative panophthalmitis will follow and destroy the eye. Hemorrhage into the vitreous occurs when foreign bodies penetrate into that tissue. Large hemorrhages in themselves destroy, or seriously injure vision permanently. Small hemorrhages may be resorbed, leaving the vitreous clear.

Aseptic particles of iron, steel, or glass lodged in the interior of the eye, and immovably fixed by encapsulation or otherwise, may not cause very serious injury. But foreign bodies of any variety that are not fixed in the eye, but change their position from time to time, are exciters of destructive inflammation of the uveal tract, and of sympathetic ophthalmia. A foreign body having remained fixed for a number of years, may subsequently become movable. When this occurs, the eye, which had been free from irritation and perhaps as useful as its fellow, is attacked by an inflammation that may exist a few weeks and then subside, leaving the sight more or less impaired. Relapses recur at variable intervals, until the sight is lost, the globe shrinks, and sympathetic disease of the other eye sets in. In other cases, the inflammation does not subside until these effects have taken place. The patient may thus become blind in consequence of the primary inflammation, aggravated by the existence of a

movable foreign body in the chamber of the vitreous. A foreign body, that may at first have been movable, may become fixed by the products of inflammation, and the eye may recover with more or less vision, or the globe may be preserved, though sightless.

Vegetable substances, copper, and mercury are not tolerated in the eye. Copper and mercury excite chemical reactions, that in turn excite destructive inflammation.

The treatment of one of these cases may be the subject of a medico-legal investigation. And the question arises, what constitutes an appropriate treatment of a case of foreign body in the vitreous? Obviously, no hard and fast rules may be laid down for the surgeon's guidance. In general, it may be said that the body should be extracted as soon as possible. The cases cited show that this rule should not be applied to all eyes containing foreign bodies. When the scleral wound is large and the loss of vitreous is great, no hope should be fostered that conservative measures will give a favorable issue; then, the eyeball should be removed to prevent suffering, and to obviate danger to the fellow-eye. Chronic inflammation of the uveal tract, or relapsing inflammation of the uveal tract, in eyes that contain a foreign body, must be treated by removal of the foreign body, or by enucleation of the eye; for by such management only may an attack of sympathetic disease be prevented.

CHAPTER VII.

SYMPATHETIC DISEASES OF THE EYE.

I. Sympathetic Irritation.—II. Sympathetic Inflammation.

Syn.—*Sympathetic Ophthalmia; Sympathetic Ophthalmitis; Ophthalmia Sympathica; Irido-Cyclitis Sympathetica.*

When a morbid state of one eye depends for its existence upon a pre-existing disturbance of the other, the eye is said to be sympathetically affected. We have to consider *sympathetic irritation* and *sympathetic inflammation.* In both, the eye first affected is the exciting eye, or *exciter*, and the eye secondarily diseased is the sympathizing eye, or *sympathizer.* In the former, the changes in the sympathizer are not structural, but have the nature of a functional disturbance. In the latter, the sympathizer exhibits the lesions of an inflammatory process involving a greater or less extent of the uveal tract. The former is a disease which responds promptly to treatment; the latter is a very grave malady, difficult to handle, ending, in the majority of cases, in blindness.

I. SYMPATHETIC IRRITATION.

Symptoms in the Exciting Eye.—They are attacks of ciliary injection, tenderness in the ciliary region, pain, photophobia, and lachrymation. Vision is more or less impaired; the eye may be blind. Objectively, inflammatory changes may be readily discovered, although in some they may be so inconspicuous as to be overlooked. The subjective symptoms may subside and recur from time to time.

The Symptoms in the Sympathizing Eye.—The eye is weak and easily fatigued. The acuteness of vision is usually

impaired, but it may be normal. Photophobia, lachrymation, and pericorneal injection are more or less marked. The ciliary region may be tender to pressure at a point corresponding to the region of greatest tenderness in the exciter. Ciliary neuralgia may become a prominent symptom. Blepharospasm, photopsia, and contraction of the field of vision have been observed.

The symptoms of sympathetic irritation usually come on immediately after the outbreak of the disturbance in the exciter, or their appearance may be delayed a few days or a few weeks. The attacks may come and go at irregular intervals for months and years. That sympathetic irritation may pass into sympathetic inflammation is denied by Swanzy,[1] Meyer,[2] and D'Oench.[3] But Fuchs,[4] Nettleship,[5] Juler,[6] Mauthner,[7] and De Schweinitz[8] are of the opinion that, in some cases, sympathetic irritation is the premonitory stage of sympathetic inflammation. Rossander[9] holds that sympathetic inflammation may succeed sympathetic irritation, and accounts for the infrequent occurrence of such a change by the fact that competent surgeons resort to the preventive treatment early in the case. According to Lawson,[10] "sympathetic irritation is closely allied to sympathetic ophthalmia, and although it presents features different from sympathetic inflammation, yet it may and frequently does drift into it. . . ." In the report of the committee on sympathetic ophthalmitis,[11] Cases 2 and 40 in the tables are examples of irritation passing into, or succeeded by inflammation, after excision of the exciter.

Sympathetic irritation may run a course of a few days or a few weeks and terminate in permanent recovery; or the recovery may be temporary, and the symptoms may recur again and again at irregular intervals for years, without change in the character of the malady; or, in one of the attacks, the sympathizer may become the seat of true sympathetic inflammation.

[1] "Dis. of the Eye," 1890, p. 255.
[2] "A Practical Treatise on Dis. of Eye," 1887, p. 216
[3] Archives of Ophthalmology, New York, 1887, p. 201, vol. xvi.
[4] "Lehrbuch der Augenheilkunde," 1891, pp. 320, 321.
[5] "Dis. of the Eye," 1890, p. 173.
[6] "Handbook of Oph. Science and Practice," 1884, p. 162.
[7] "Sympathetic Diseases of the Eye," New York, 1881, pp. 68, 69.
[8] "Diseases of the Eye," 1892, p. 337.
[9] Annales d'Oculistique, 1876, p. 301 *et seq.*, abstract.
[10] Royal London Oph. Hosp. Reports, vol. x., 1880, p. 2.
[11] Tr. Ophth. Soc. Unit. King., vol. vi.

II. SYMPATHETIC INFLAMMATION.

Sympathetic inflammation has no typical form; it has no character *sui generis* which differentiates it from other cases of irido-choroiditis, whether they be serous or plastic.[1] To this opinion of De Wecker's there can be no valid objection; and it follows that by the objective symptoms alone a diagnosis of the *sympathetic* nature of the disease cannot be sustained.

Symptoms in the Exciter.—There is, commonly, well-marked objective evidence of inflammation in the uveal tract, but the lesions may be indistinct and unnoticed. "An inflammation in the uveal tract of the exciting eye is a necessary factor in the production of sympathetic inflammation."[2] Vision may be good; commonly it is seriously impaired, and often it is totally destroyed. Pain, photophobia, lachrymation, ciliary injection, and tenderness are usually present. In some cases, however, the exciter may be quiet, that is, it may give no signs of irritation, when sympathetic inflammation breaks out in the sympathizer.[3] Tenderness in the ciliary region, causing the patient to shrink away in a significant manner when that point is touched gently through the closed eyelid, is often marked. But that does not necessarily imply that an attack of sympathetic inflammation is imminent.[4]

Symptoms in the Sympathizer.—They depend in some measure upon the form of the disease. Sympathetic inflammation may present a variety of lesions. The greater number of the cases are examples of plastic irido-cyclitis and plastic irido-choroiditis.[5] A certain number of cases are instances of plastic iritis only. Frequently the sympathetic inflammation exhibits the characteristics of serous iritis and serous irido-choroiditis. Swanzy and others[6] believe that the serous form of inflamma-

[1] De Wecker: Annales d'Oculistique, June, 1892, p. 413.

[2] Schirmer: Ophthalmic Review, London, vol. xii., March, 1893, p. 89.

[3] Tr. Ophth. Soc. Unit. King., vol. vi. Tables of 211 cases of sympathetic ophthalmia. The committee making the report was composed of the following ophthalmologists: John Couper, W. A. Brailey, W. Adams Frost, R. Marcus Gunn, Wm. Lang, J. B. Lawford, E. Nettleship.

[4] Swanzy, *op. cit.*, p. 256.

[5] "Graefe-Saemisch Handbuch d. Augenheilkunde," 4, p. 520.

[6] *Op. cit.*, p. 256; De Wecker, "Traité complet d'Ophthal.," tome ii., Paris, 1886, p. 321. Milles, Brailey, Royal London Oph. Hos. Rep., vol. x.

tion is the first stage of nearly all cases of sympathetic ophthalmitis, which as a rule passes into the plastic variety. This opinion should be accepted with some reserve. Admitting that the presence of "keratitis punctata" is presumptive evidence that severe inflammation is present in the uveal tract, I examined the histories of the 211 cases of sympathetic ophthalmitis in the report[1] already alluded to, and found "keratitis punctata" mentioned in only 26 cases. After making due allowance for the unavoidable imperfections in the histories, this finding still casts a measure of doubt upon the accuracy of Swanzy's observation.[2]

Neuro-retinitis, in rare cases, is the form of the sympathetic disease.[3] Schirmer thinks there is "ample evidence that there is such a condition as a primary sympathetic papillo-retinitis." It is a benign affection, cured by enucleation, and depends upon the transmission of bacterial products from the exciter.[4]

Exceptional cases of sympathetic conjunctivitis and sympathetic keratitis are mentioned by Noyes and others.[5]

The disease may come on insidiously and pass beyond the initial stages before the patient's attention is attracted. Lawson[6] says: "The disease usually commences without pain as a warning, though it is commonly preceded by a certain amount of irritation, slight photophobia, impairment of accommodation sufficient to give rise to fatigue of the eye, and lachrymation. One or all of these symptoms may be present, and in an adult would probably draw attention to the state of the eye, but in a child they are not, as a rule, sufficient to lead him to make complaint, so that in children the disease is not infrequently far advanced before it is detected." In 40 of the 211 cases already referred to, the sympathetic disease began insidiously. In 36

[1] Tr. Oph. Soc. Unit. King., vol. vi.

[2] Compare Mauthner, "Sympathetic Diseases of the Eye, p. 81 *et seq.*, and p. 168. In same line is the evidence in Gunn's cases, R. L. Ophth. Hosp. Rep., xi., 1886–87.

[3] Tr. Oph. Soc. Unit. King. ; Alt, Archives of Oph. and Otol., New York, vol. v. ; Deutschmann, "Ophthalmia Migratoria," gives many references to cases of this nature, pp. 117–119.

[4] Ophthalmic Review, vol. xii., March, 1893.

[5] Noyes, "Dis. of the Eye," 1890, p. 492 ; G. L. Johnson, Archives d'Ophthalmologie, Jan., 1892, p. 53, case of sympathetic keratitis. For criticism of recorded cases of sympathetic conjunctivitis, and sympathetic keratitis, see Deutschmann, "Ophthalmia Migratoria," pp. 108–116, also Schirmer, Ophthalmic Review, March, 1893, pp. 91–92.

[6] R. L. Oph. Hosp. Reports, 1880, vol. x., p. 1.

of these both eyes were not painful, or were quiet. In 2 of the remaining 4, the exciter was quiet, while the sympathizer was painful; and in 2 the sympathizer was quiet, while the exciter was painful.

In the *plastic form* of inflammation in the sympathizer, ciliary injection and tenderness are usually well marked, the pupil is contracted, and numerous synechiæ quickly attach the pupillary margin of the iris to the capsule of the lens. The posterior synechiæ may be complete, shutting off all communication through the pupil between the anterior and the posterior chambers. The pupillary space may be filled with a plastic exudate, which may also fill the posterior chamber and invade the ciliary body. In rare cases, pus and blood may be found in the anterior chamber. The choroid may be invaded by the plastic inflammation. The vitreous becomes turbid with particles of plastic material. Thus, the eye may be the seat of plastic iritis, plastic cyclitis, and plastic choroiditis at the same time. Early in the disease, the intra-ocular tension may rise, but eventually, in severe cases, the eyeball becomes soft and atrophic.

The subjective symptoms are ciliary neuralgia, photophobia, lachrymation and impairment of vision, amounting to absolute blindness in the worst cases. The neuralgic pains may be very severe in the eye, and in bad cases they may extend to branches of the fifth nerve, other than the ophthalmic.

Both the objective and the subjective symptoms vary greatly in severity in the different cases. The symptoms may ameliorate and the eye may return to a state of usefulness, though generally it still exhibits some sequelæ of its hazardous experience. Exceptional cases have been observed in which there has been a single attack of sympathetic inflammation, resulting in recovery with a useful eye. As a rule, the course is less favorable. After a period of quiescence, a relapse occurs, and after one or more relapses the eye is destroyed. The severest cases are the more common and end in blindness.[1]

In the **serous variety** of inflammation in the sympathizer, the circumcorneal injection is not very marked; the iris is discolored, the pupil is small; there may be a few posterior synechiæ; the anterior chamber is deep; the aqueous humor is

[1] Fuchs, *op. cit.*, p. 312; Schirmer, Ophthalmic Review, vol. xii., March, 1893, p. 94.

cloudy. Small grayish-white dots in variable numbers are found on the posterior surface of the cornea—this is "keratitis punctata." The vitreous is turbid, and chorio-retinitis or papillitis may be noted, if the media are sufficiently clear. Vision is impaired. Photophobia, lachrymation, and mild attacks of pain complete the list of symptoms.

The disease may run a chronic course, and, in exceptional cases, terminate in recovery with a useful organ, without operative interference directed to the exciter.[1] Other cases make a less complete recovery and are subject to relapses. Still other cases, the greater number, end in blindness. The serous variety of sympathetic inflammation is considered the *benign* form of the disease, whereas the plastic variety is justly regarded as the *malignant* form.

Etiology.—Sympathetic irritation may appear in consequence of a variety of injuries and diseases of the eye. The causation of sympathetic inflammation has been held to be the same. But the more thoroughly the matter is sifted the clearer does it appear that in order that sympathetic inflammation may break out in the fellow-eye, it is necessary that inflammation of the iris and ciliary body in the *exciter* shall be present. An irido-cyclitis not due to a perforating lesion of the tunics of the eyeball is *very exceptionally* the cause of sympathetic inflammation. The committee on sympathetic ophthalmitis were of the opinion that "sympathetic ophthalmitis occurring without a perforating lesion of the exciting eye is, if not unknown, at any rate extremely rare."[2] The perforating lesions that may be followed by irido-cyclitis are wounds of all varieties—lacerated, contused, incised, punctured, accidental, and operative. The wound is most dangerous when it involves the ciliary region. This is the general opinion of ophthalmic surgeons. The strongest objection to this view of the matter is that made by Alt. Having critically examined 110 eyes enucleated for sympathetic ophthalmia, Alt reports the following conclusion bearing upon this question: "Cicatrices and foreign bodies in the ciliary body or incarceration of it—which are usually looked upon as the most important factor in sympathetic affections—appear in only 17¼ per cent, while the affections of the ciliary body all together amount to 76½ per cent. The iris is changed in

[1] Noyes, *op. cit.*, p. 490. [2] Tr. Oph. Soc. U. K., vol. vi., p. 179.

but 68 per cent, and the choroid in 73 per cent, thus showing about the same number of changes in each of the parts of the uveal tract, with only a slight percentage in favor of the ciliary body."[1] Gunn found that "as regards the accidental wounds, the mere position of the injury did not seem to influence the character of the inflammation or the result; wounds of the ciliary region had as low a percentage of severity as those confined to the cornea with implication of the iris. Similarly the nature of the instrument appeared to make no difference in this respect."[2]

The entrance of foreign bodies into the eye must cause a penetrating lesion. Such injuries may be the initial stage in the etiology of sympathetic inflammation. When the foreign body has lodged in the tissues of the eyeball in such a position that extraction of it is impossible, the gravity of the case is aggravated. Randolph thinks that "by far the greater number of sympathetic eye-troubles are caused by the entrance of foreign bodies. Clinical experience shows us every day that wounds resulting from infectious foreign bodies cause the most violent inflammations, and, on the contrary, wounds caused by aseptic matter result in comparatively little disturbance."[3] Schirmer's conclusions are doubtless nearer the truth. He is of the opinion that "it is the inflammation which follows a perforating wound, and not the wound itself, which threatens the fellow-eye, and such inflammation is usually due to infection through the wound. The danger attaching to the presence of a foreign body in the interior of the eye has probably been somewhat overrated, for there is no evidence that aseptic foreign bodies can cause sympathetic inflammation, even though, as in the case of fragments of copper, they may by chemical action damage the injured eye. The danger lies in the fact that very many foreign bodies carry infective organisms with them into the eye. The only cases in which a foreign body was supposed to affect the fellow-eye without the intervention of uveitis in the injured eye, were cases of sympathetic irritation only. The most dangerous cases are those in which the injured eye seems

[1] "Anat. Causes of Sympathetic Ophthalmia," Archives of Ophthalmology, N. Y., vol. v.

[2] Royal London Oph. Hosp. Reports, vol. xv., 1886–87, p. 316.

[3] "Pathogenesis of Sympathetic Ophthalmia," Archives of Ophthalmology, N. Y., vol. xvii., 1888, p. 192.

at first to tend toward recovery, but nevertheless remains more or less injected and tender on pressure. This tenderness is the expression of a persistent cyclitis, and is a most important indication. Its absence cannot, unfortunately, be taken as a proof that there is no cyclitis, for a slight cyclitis does not always reveal itself by tenderness on pressure."[1] Hirschberg finds that a foreign body lodged in the eye may excite destructive inflammation even though it may not have been infected.[2]

Perforating ulcers of the cornea may be succeeded by relapsing irido-cyclitis and lead to sympathetic inflammation of the fellow-eye.

Burns of the cornea and symblepharon are given as causes of sympathetic inflammation. It is altogether improbable that such could be the cause unless perforation of the cornea had occurred.

Panas has reported two cases of sympathetic irido-cyclitis following tattooing of the cornea.[3]

Intra-ocular tumors are said to cause sympathetic inflammation. Schirmer, after a careful search, found "twenty-eight cases attributed to sarcoma of the choroid and two to glioma of the retina. The analysis of these shows that nine were cases of sympathetic irritation; that some others were of doubtful character; and that in several more a perforation of the exciting eye had occurred either spontaneously or by operation. Excluding these, there remain at least three cases in which a choroidal sarcoma, with no perforation of the tunics, appeared to cause a true sympathetic inflammation in the fellow-eye. In these three cases the exciting eye presented in addition to the tumor a well-marked irido-cyclitis, and this complication was present also in some of the more doubtful cases just referred to. It appears, therefore, that a choroidal sarcoma can only cause sympathetic inflammation when it is associated with irido-cyclitis, and seeing that only a small minority of such tumors are complicated in this way, the irido-cyclitis and not the tumor must be regarded as the chief agent."[4]

Intra-ocular cysticercus is mentioned as a cause of sympa-

[1] Ophthalmic Review, vol. xii., March, 1893, pp. 87, 88.

[2] Graefe's Archiv für Ophthal.

[3] Cited in "Ophthalmia Migratoria," p. 87.

[4] Oph. Review, vol. xii., March, 1893, p. 85. See also Report of Com. Symp. Ophthalmitis, *op. cit.*, for similar criticism.

thetic inflammation. Deutschmann could not find such a case in literature, but Schirmer found one case of mild sympathetic irritation due to that cause.

Irritation due to wearing an artificial eye is also given as a cause of sympathetic inflammation. Such might be the consequence of wearing an artificial eye over a phthisical globe, for that might excite a relapse of irido-cyclitis in the degenerated eye. But it is highly improbable that an artificial eye ever excites sympathetic inflammation under other circumstances.

Incubation.—The onset of sympathetic inflammation occurs generally in from three to twelve weeks after the injury to the exciter. The shortest interval between the injury to the exciter and the outbreak of sympathetic inflammation, according to the Committee of the Ophthalmological Society of the United Kingdom,[1] was three days in Case 134, but this record is not above suspicion. In Case 95, the interval was only three or four days, but may have been much longer. De Schweinitz states that it occurs exceptionally as early as the seventh day.[2] According to Fuchs,[3] the shortest period is two weeks. Deutschmann[4] asserts that the shortest interval recorded in literature is ten days, in the case described by O. Becker. In his monograph on "The Sympathetic Diseases of the Eye,"[5] Mauthner says: "I must emphasize the fact that, in my own experience, I know of no case in which I ever saw sympathetic ophthalmia appear sooner than in four weeks after the injury. I grant, indeed, that this period of four weeks might be somewhat shortened, in occasional cases, but I will not grant that the necessary period can be reduced *to a few days*, as is alleged to have been observed by several authors."

There is no definite limit to the period during which an attack of sympathetic ophthalmia may occur. Cases observed twenty, thirty, forty, and even sixty years after the injury to the exciter are on record. According to Fuchs,[6] "so long as an eye destroyed by injury remains free from inflammation and tenderness it is not liable to excite sympathetic inflammation. But if such an eye become irritable and inflamed, which it is apt to do if there be a foreign body lodged in it, the danger of

[1] Tr. Oph. Soc. U. K., vol. vi., p. 264.
[2] *Op. cit.*, p. 338.
[3] *Op. cit.*, p. 322.
[4] "Ophthalmia Migratoria," p. 104.
[5] P. 143.
[6] *Op. cit.*, pp. 321, 322.

sympathetic inflammation again appears. An eye destroyed by a traumatism is a standing menace to its fellow. The danger of sympathetic inflammation is greatest during the most active stage of irido-cyclitis in the exciting eye." This accords with the experience of ophthalmic surgeons in general.

Frequency of Occurrence.—As a contribution to this part of the subject the following facts are offered. They will give an approximately correct idea of the matter. Among the inmates of asylums for the blind, about 4.5 per cent lost their vision by sympathetic ophthalmia.[1] Among 627 blind inmates of the Hospice des Quinze Vingts, Paris, Trousseau[2] found that 14, or 2.2 per cent of the number, became blind in consequence of sympathetic ophthalmia. Out of 500 enucleations of the eye in the practice of Knapp,[3] 51 eyes were removed for sympathetic irritation and 21 were removed for genuine sympathetic ophthalmia. Among the 360 enucleations made by Becker,[4] the eye was removed for irido-cyclitis with sympathetic disease in 10 cases. From the practice of Roosa, 131 cases of enucleation are reported;[5] among them were 35 cases of sympathetic ophthalmia and 15 cases of sympathetic irritation.

Diagnosis.—Ordinarily it is not difficult to detect inflammatory changes in the uveal tract. But there are cases of sympathetic ophthalmia which, in the early stages at least, may deceive the observer. The diagnosis of papillitis, neuro-retinitis, and chorio-retinitis, when the changes are inconspicuous, will be more difficult to establish, should the refraction of the eye present a high degree of hypermetropia or astigmatism, especially if the observer be not on his guard. In obscure cases of sympathetic ophthalmia, atropine may be used to facilitate the ophthalmoscopic examination and to reveal inflammatory lesions that might otherwise pass unnoticed. Especial attention should be given to the cornea and iris, for the existence of keratitis punctata and slight posterior synechia may be overlooked unless the examination be thorough.

Having noted the presence of a lesion in the fellow-eye, the question arises, Is that lesion due to the presence of disease in the eye primarily affected; in other words, have we to deal with

[1] Noyes, *op. cit.*, p. 698 *et seq.*
[2] "Hygiène de l'Œil," p. 16.
[3] Archives of Ophthalmology, N. Y., vol. xvi., p. 201.
[4] Augenklinik in Heidelberg, 1888, p. 93.
[5] N. Y. Med. Record, Oct. 15th, 1892, pp. 445, 446.

a case of sympathetic trouble? The differential diagnosis is very important, and, in certain cases, is surrounded by great difficulties. For, lesions undistinguishable from those observed in sympathetic inflammation are the effect of a variety of causes. Inflammations of the uveal tract dependent upon constitutional causes may first appear in one eye and subsequently break out in the other, but it cannot be said of such cases that the disease has been transmitted from one eye to the other. In both instances the cause of the disease is a constitutional one. Thus, inflammations of the cornea, iris, ciliary body, and choroid may be due to syphilis, scrofula, rheumatism, diabetes, gonorrhœa, acute febrile diseases, and traumatisms, or they may be idiopathic. Inflammation of the choroid may be due also to anæmia, chlorosis, septic emboli, meningitis and cerebro-spinal meningitis, orbital abscess, and thrombosis of the orbital veins. Inflammations of the retina may be due to syphilis, nephritis, diabetes, leukæmia, or they may be idiopathic. Inflammations of the optic nerve may be due to syphilis, scrofula, nephritis, diabetes, cerebral disease, acute febrile diseases, severe hemorrhages, menstrual disorders, pregnancy, childbirth, lead poisoning, prolonged exposure to cold, inflammation and tumors of the orbit, and heredity.[1] The presence of any of those conditions and their etiological bearing upon the case under consideration must be ascertained before a correct opinion respecting the sympathetic nature of the disease may be formulated. Primary glaucoma also must be excluded.

The nature of the injury and the condition of the eye first affected will throw some light on the differential diagnosis. Severe injuries resulting in penetration of the eyeball and lesion of the ciliary body, especially when they are followed by a chronic irido-cyclitis showing marked and persistent tenderness in the ciliary region, are very dangerous. Foreign bodies remaining in the eye, especially fragments of stone, copper, and lead, and infected bodies of all kinds are very prone to excite sympathetic ophthalmia sooner or later. On the other hand, eyes in the condition of purulent panophthalmitis are comparatively infrequently exciters of sympathetic disease. Sympathetic disease does occur, however, when the exciter is in a state of panophthalmitis.[2]

[1] Fuchs, *op. cit.*, pp. 316, 347, 353, 446, 479, 480. [2] Alt, *op. cit.*

Should the inflammation in the second eye begin in from three to twelve weeks after the injury to the first eye, or after an outbreak of cyclitis in an eye disorganized by a penetrating wound received months or years before, a suspicion that the disease is sympathetic must be entertained. But should the disease break out in the second eye after a much shorter or a much longer interval, the opinion that the disease is sympathetic should be accepted with greater reserve.

If the injured eye be enucleated and the disease in the fellow-eye promptly abate, the second eye was probably sympathetically affected. On the contrary, should inflammation in the second eye remain unchanged after excision of the first, or should the disease increase in severity, it cannot be said that the second eye was not sympathetically diseased; for, after sympathetic inflammation has appeared, enucleation of the exciter may not produce any effect upon it.

Prognosis.—In addition to what has preceded, it may be stated that sympathetic irritation, although it may have recurred again and again, is very amenable to treatment. Meyer[1] says: "The prognosis may be regarded as very good in sympathetic irritation, favorable in serous iritis, very bad for plastic irido-cyclitis, for useful vision is rarely preserved." According to Swanzy,[2] "the vast majority of cases of sympathetic inflammation end in blindness." Nettleship[3] remarks: "When once sympathetic inflammation has begun we can do little to modify its course." De Schweinitz[4] says: "The prognosis of sympathetic ophthalmitis is usually grave. In some cases recovery occurs; this has been seen in those cases in which neuro-retinitis is present. More frequently, especially in the forms which appear as an irido-cyclitis or irido-choroiditis, the sight of the eye is lost, and the organ shrinks. The varieties which appear as a serous iritis give the greatest hope of a good result. It is extremely important to warn patients of the grave nature of this malady, and if an attempt is made to save an eye injured in the way already described, it must be done with the full understanding of the serious risks which are undertaken."

Referring again to the report of the committee on sympathetic ophthalmitis,[5] we find that of 211 cases the details of the

[1] *Op. cit.*, p. 217.
[2] *Op. cit.*, p. 258.
[3] *Op. cit.*, p. 175.
[4] *Op. cit.*, pp. 341, 342.
[5] Tr. Oph. Soc. U. K., vol. vi., p. 173.

treatment were given in 90; of these 50 recovered completely. Taking 203 of these cases for the basis of calculation, I found that about 26 per cent were totally lost, about 23 per cent recovered with $V=\frac{20}{20}$, and about 50 per cent partially recovered. It should be noted that a reasonable doubt may be entertained respecting the sympathetic nature of the inflammation in a few of the cases; and that in others the records were very imperfect. Eyes reported as having recovered may have been destroyed subsequently by a relapse of the inflammation. The committee were of the opinion that "the prognosis in sympathetic ophthalmitis is, on the whole, more favorable if the disease comes on after a short than after a long interval."[1]

Gunn,[2] in a carefully prepared paper, reported 47 cases of sympathetic ophthalmia in which the final condition of the patient is given as follows: "In 34 cases the *exciting eye* was lost; in 30 of these it was excised. In 3 cases the exciter although not really lost was excised. In 6 cases the exciter retained useful vision, although the sympathizer was lost in 5 and greatly damaged in the sixth." "In 5 cases the final condition of the *sympathizing eye* was good, *i.e.*, retained at least $\frac{2}{3}$ of normal vision; in 12 the result was moderate (able to get about); in 25 cases the sympathizer was known to have been rendered useless. In 8 of the 12 cases in which the result was "moderate," a progressive degeneration was noticeable.

Propagation of the Sympathetic Diseases.—It is generally believed that sympathetic irritation is due to reflex action through the ciliary nerves. But the *raison d'être* of sympathetic inflammation is still under discussion. Mackenzie,[3] in the earliest systematic description of the disease, speaking of the *ratio symptomatum*, offered the conjecture that the blood-vessels, the ciliary nerves, and especially the optic nerves may be the various channels by which the morbid process is transmitted from one eye to the other. In 1858, Müller enunciated the theory that the disease is propagated by reflex action through the ciliary nerves. This theory has been supported by various eminent observers and still claims many partisans. Deutschmann[4] opposes that theory and has undertaken to prove, by ex-

[1] Tr. Oph. Soc. U. K., vol. vi., p. 189.

[2] R. L. Oph. Hosp. Reports, vol. xi., 1886–87.

[3] "Diseases of the Eye," 1844.

[4] "Ophthalmia Migratoria," 1889.

periments on animals and by pathological and bacteriological examinations of human eyes, that sympathetic ophthalmia is due to the action of micro-organisms and is propagated from the exciter to the sympathizer by the lymph channels of the optic nerves. This theory has excited much discussion. It has been provisionally accepted by many competent ophthalmologists and totally repudiated by as many others. At the present time, the most that can be said of this matter is that no theory pretending to explain the propagation of sympathetic ophthalmia has withstood the assaults of adverse criticism.

Treatment. I. The Preventive Treatment, when the Exciter is Destroyed.—The surest prophylaxis of sympathetic inflammation consists in enucleation of the exciter. The operation is indicated when useful vision has been destroyed by a penetrating injury or by disease of the cornea, resulting in perforation of that structure, if the eye be painful or tender to pressure, and especially if it contain or may be supposed to contain a foreign body. Enucleation should be more urgently advised, when the symptoms of sympathetic irritation have become manifest in the fellow-eye. Globes in the state of *phthisis bulbi*, and stumps of the optic nerve, when tender to pressure, should be removed, and especially if the other eye show any signs of sympathetic disturbance.[1] It is the duty of the physician in charge of such cases to warn the patient against the dangers of sympathetic inflammation. And too much faith should not be put in the patient's ability to note the first sign of disturbance in the healthy eye, which shall bring him to an operation for excision of the injured organ. The disease sometimes begins insidiously and its existence may not be suspected until well-marked structural changes are developed; this is especially true of children and ignorant persons. But not all such eyes, or stumps of eyes, are exciters of sympathetic inflammation or even sympathetic irritation, although they may be painful and tender and contain a foreign body. Just how many, or which one, will cause sympathetic disease cannot be predicted with certainty. Some latitude, therefore, must be allowed to

[1] Compare Fuchs, *op. cit.*, pp. 328, 329; Graefe-Saemisch, *op. cit.*, 4, p. 520; Lawson, *op. cit.*, p. 130; Nettleship, *op. cit.*, p. 175; Swanzy, *op. cit.*, p. 259; Meyer, *op. cit.*, p. 218; Juler, *op. cit.*, p. 164; Noyes, *op. cit.*, p. 494; De Schweinitz, *op. cit.*, p. 340; Warlomont, Annales d'Oculistique, 1876, t. lxxv., p. 52; Rossander, *ibid.*, p. 305, abstract.

the judgment of the attendant in a given case respecting the time when an excision of the eye should be performed, but the patient must be made to understand that attempts to save the injured eye are fraught with more or less danger to the other. Should the patient wish that every possible precaution be taken against the outbreak of disease in his remaining eye, the injured organ should be enucleated without further delay.

So far as regards sympathetic irritation, excision of the exciter is an almost absolutely certain preventive, and is curative in nearly all cases even after the disease has broken out. Rheindorf, in 1865, collected 75 cases of sympathetic disease, 55 of which were treated by enucleation. Of these, 28 were cases of sympathetic irritation, in 27 the result was cure or improvement, and in *one* the disease was said to have been aggravated by the operation. Mooren, in 1869, published a series of 35 cases of sympathetic ophthalmia treated by enucleation. Of these, 16 were cases of sympathetic irritation, and all were cured. In 1876, Rossander published 117 enucleations for diverse causes: in 68 the disease was sympathetic ophthalmia. Of these, 33 were cases of sympathetic irritation, and all were cured. Vignaux, in 1877, published 48 cases of sympathetic irritation treated by enucleation; complete cure in 43, cure incomplete or disease stationary in 3, and in 2 the treatment failed. In 16 cases in which the appearance of sympathetic inflammation was imminent at the moment of enucleation, he was able to determine in all cases the persistence of the normal state after a period of one to four and one-half years. D'Oench, 1887, reports from Knapp's practice 51 enucleations, for sympathetic irritation, with a speedy cure in every case, although in some the symptoms had existed for a long time.

In a certain number of cases of sympathetic inflammation, neither enucleation of the exciter nor any other treatment will prevent an outbreak of the disease. The report on sympathetic ophthalmitis [1] gives "three cases in which the damaged eye was excised almost immediately after the injury and yet iritis afterward occurred in the other. We think it well to quote these cases without expressing an opinion as to their nature, pointing out, however, that the attack in each case differed materially

[1] Tr. Oph Soc. U. K., vol. vi., pp. 192-194.

from common sympathetic ophthalmitis, and that in each case the damaged exciting eye had been ruptured by a severe blow.

"In Case 48, a woman, æt. 45, had her left eye ruptured by a blow, on January 15th, 1884. It was excised by Dr. Little, of Manchester, on the same day. The other (right) eye seemed healthy at the date of excision. On the 20th there was slight muco-purulent conjunctivitis, but pupil was clear and active. On the 23d, chemosis, pupil sluggish, acting imperfectly to atropine. 24th, distinct iritis with lymph in iris and pupil, severe congestion and pain, conjunctival discharge nearly stopped. 25th, iritis worse, no keratitis punctata could be made out; there was marked congestion at the limbus corneæ. From this time rapid improvement, and by February 20th the eye was practically well, free from synechiæ and V. perfect. There was no history or evidence of syphilis and no other apparent cause for the iritis.

"Case 112.—Man, aged about 20, left eye hurt by a blow on January 22d, 1883, and excised the next day. The socket healed well and remained free from irritation. A glass shell worn after two weeks. Seven weeks after excision acute iritis with ciliary congestion and pain set in in the other (right) eye. The attack not severe, and was well in a few days, vision not being affected. It remained well for seven months, when a relapse occurred with more synechiæ. This attack lasted nearly two months, but the eye recovered with V=$\frac{20}{40}$. No keratitis punctata was observed. None of the ordinary causes of iritis noted."

"Case 109.—An engine-driver, æt. 41, had his right eye smashed and orbital tissue much bruised in a railway accident. The eye was excised within forty-eight hours. The tissues healed tardily and discharged more than usual. From four to six weeks later severe acute iritis came on in the other (left) eye. The attack lasted about a month. Then the eye became quiet and sight improved somewhat, but a few days before admission, six months after the accident, a tolerably severe relapse took place, vision not 20 Jaeger, Tn. Rapid improvement. Five weeks later V=$\frac{20}{40}$, numerous synechiæ, thin membrane in the pupil, iris texture natural. The eye remained quiet for the few following weeks, during which he remained under notice. Chronic articular rheumatism in hip, knee, and elbow, on same side as the iritis, four years previously; but no inflammation of the eye then; no syphilis."

It may be assumed that these three cases belong to the mild grade of sympathetic inflammation. As such they are absolutely exceptional; and, if it be admitted that they are genuine cases of sympathetic inflammation, the cause of the outbreak of the sympathetic disease, after the prompt excision of the injured organ, may be sought in the bruising of the tissues of the orbit.

On the other hand, sympathetic inflammation may occur after excision of the exciter, when the operation is performed after a longer delay. Mauthner[1] has claimed that in some of those cases the operation was the starting-point of the sympathetic disease. He cites two cases of neuro-retinitis published from Mooren's practice, and another case of "hyperæsthesia ciliaris" also Mooren's, all of which, he claims, were produced by the enucleation. Davis[2] has reported from the practice of Roosa two cases of sympathetic inflammation occurring after enucleation of the exciter. In the first, enucleation of an atrophied globe, resulting from an accident after a cataract extraction two months earlier, was performed, June 7th, 1890. On July 16th, 1890, the patient returned with sympathetic irido-cyclitis in the remaining (right) eye. Removal of the stump of left eye on the following day. Other treatment immediately inaugurated. Finally the eye became soft and V=pl (?). The second case was one of injury and traumatic cataract, seen August 5th, 1890. Cataract removed, iridectomy performed; eye remained painful and was enucleated, November 20th, 1890. Good recovery, no sympathetic irritation when discharged. December 20th, 1890, patient returned with sympathetic irido-cyclitis. Patient had noticed for a week that he could not see distinctly. In June, 1892, V=$\frac{10}{200}$; patient gets about with difficulty. "The plastic irido-cyclitis is slowly destroying his sight."

Referring again to the Report on Sympathetic Ophthalmitis[3] for further information regarding this question, we find that there were "30 cases of genuine sympathetic ophthalmitis setting in after enucleation of the exciter, and 6 others the sympathetic nature of which is doubtful. Taking the 30 true cases we find that 18 recovered completely, 3 partially, and 9 were lost.

"The first subject of inquiry in this group is whether the sympathetic disease is caused by the injured eye or by the operation for its removal. If the disease were due to the excision we should expect to meet occasionally with cases coming on a long time afterward. We find the following four cases in which such is said to be the case:

"Case 1.—A young woman lost the left eye from spontaneous irido-choroiditis. Many years after, at the age of 30, it was excised on

[1] "Symp. Dis. of the Eye," p. 153.
[2] N. Y. Med. Rec., Oct. 15th, 1892.
[3] Tr. Oph. Soc. U. K., vol. vi., pp. 190–192.

account of irritation in the right. This ceased after excision, but twelve months after the operation the right eye passed through a painless attack of iritis with keratitis punctata and opacities in the vitreous. It improved for a time, but four years later the disease was still active and vision very bad. Other possible causes of iritis not mentioned. (Cant, Case 1, unpublished.)

"Case 191.—A woman lost her left eye by sloughing of the cornea in gonorrhœal ophthalmia at 36. After being quiet ten years it became painful, and was excised. A year afterward, at the age of 47, there was pain in this orbit with puckering around the end of the optic nerve. At the same time acute iritis came on in the other (right) eye. The stump of the left optic nerve was cut out, and under treatment the right rapidly and completely recovered, and did not relapse. There is no note as to syphilis or gonorrhœal rheumatism. (Ayres, Knapp's *Archives*, XI., 199.)

"Case 199.—The left eye of a man, æt. 30, was excised, reason not stated. He wore an artificial eye without trouble for the next fifteen years, when, on getting a new eye, much irritation of the conjunctiva came on. Two and one-half weeks after beginning the use of this eye, well-marked plastic iritis with much effusion began in the other (right) eye. It recovered perfectly under the usual measures, including mercury and removal of the artificial eye. Three months later vision perfect. No history of rheumatism or syphilis. (Culbertson, *Amer. Jour. Ophth.*, I., 161.)

"Case 200.—A man, æt. 23. Blow on right eye with a small piece of wood, probably causing rupture. Excised seven months later for irritation in the left. All irritation ceased, and for nearly nine years he could see as well as ever he did in his life. Then (nine years after excision) slight pain in the eye and progressive failure of sight. When seen twelve months later, very severe plastic iritis with ciliary staphylomata, T slightly +, severe pain, V= p. l. in the outer part of the field. After sclerotomy, pain subsided, but the eye became soft. Other possible causes of iritis not mentioned. (Lawson, O. H. R., X., p. 3.)

"Another case by Colsmann (Case 207) may be mentioned, in which the interval was six months, but as the disease in the second eye took the form of neuro-retinitis only, the sympathetic nature of the attack is very doubtful.

"The only two of these cases which are at all convincing are Cases 1 and 200, and to them we do not see that any exception can be taken, unless it be assumed that the disease in the second eye was spontaneous.

"Again if the sympathetic disease were due to the excision, we should expect to meet with it sometimes after the removal of eyes which, had they been left, would not have produced it.

But in turning to the cases we find only a single instance, and that one already quoted as doubtful (Case 1 above), in which the exciter was lost by spontaneous inflammation. In all the others there had been a complicated wound, operation, or perforating ulcer.

"Assume then that sympathetic disease beginning after excision is due to the eye and not to the operation for its removal, we may next ask: What is the interval that may elapse between removal of exciter and the onset of the sympathetic inflammation? We find that this (the 'second interval') was between two and five days in 11 cases; between one and two weeks in 7 cases; about three weeks in 6 cases; and from one month to eight weeks in 5 cases. The 5 cases just quoted in which the interval was extraordinary in length are not here included. Although the length of the 'second interval'[1] thus varied from two or three days to seven or eight weeks, the sum of the first and second intervals showed a much smaller range, viz., from four to eight weeks, only exceeding the latter in two cases. Now, from four to eight weeks is a common interval between injury and sympathetic disease, but the second interval alone was, as the above figures show, usually too short to permit of our assuming the excision to have been the cause. It may further be observed that in none of these cases was the eye excised promptly; ample time was always allowed for traumatic inflammation to set in. In fact the 'first interval' alone was nearly always of sufficient length to account for the occurrence."

Such is the nature of the evidence both for and against the opinion that enucleation may excite sympathetic inflammation. In conclusion, it may be said that while the *possibility* that the operation may be the starting-point of sympathetic disease cannot be denied absolutely, still the burden of proof remains with those who maintain that in a given case it has excited an attack of sympathetic inflammation.

II. The Preventive Treatment, when the Exciter is Not Destroyed.—Traumatisms may destroy an eye directly and immediately, or indirectly through the consecutive inflammation. It follows, in some instances, that an injured eye may,

[1] "First interval" equals time intervening between the lesion and the excision; "second interval" equals time intervening between the excision and occurrence of sympathetic ophthalmia.

in the early days, retain a fair amount of vision, which later on is destroyed more or less thoroughly by the inflammatory process. Hence, in coming to a decision regarding the treatment to be adopted in a case of injury, it is necessary to consider both the immediate and the remote effects of the accident upon the usefulness of the organ. Should the eye still retain fair vision, and, after a few days' observation of the case, should it appear highly probable that the function of the eye will be permanently destroyed by the inflammatory process, enucleation may be advised as a protective measure against sympathetic ophthalmia.

If, after an accident which has not totally destroyed the usefulness of an eye, the symptoms of sympathetic irritation appear in the fellow-eye, the injured organ may be removed; and it is not advisable to delay the radical treatment when the symtoms of irritation are intense enough to excite apprehension that the other eye may experience an outbreak of sympathetic inflammation.[1]

As a general rule, to which there are exceptions, it may be advised that all eyes in a state of chronic irido-cyclitis, which contain foreign bodies that cannot be removed, should be enucleated to prevent sympathetic ophthalmia, even though they may retain useful vision.[2]

In many cases, when the exciter retains considerable visual power, it is difficult to decide upon the best treatment to adopt. The dangers incident to an attempt to save some of these eyeballs should be fully and fairly explained to the patient and his family. Should they leave the attendant untrammelled in his management of the case, he should adopt the surest method of saving his patient's vision, even at the expense of an eye which may still retain considerable visual acuteness. On the other hand, the patient or his family may interdict operative interference, and it is then the surgeon's duty to do as well as possible under the circumstances, in which contingency he should not be held responsible for a disastrous termination of the case.

III. Curative Treatment, when the Exciter is Destroyed.—Should enucleation of the exciter be performed after sympathetic inflammation has broken out? The strongest ob-

[1] Mauthner, "Sympath. Dis. of the Eye," p. 167.

[2] Swanzy, *op. cit.*, 1890, p. 259.

jection to that practice is raised by Mauthner,[1] who says: "In my opinion, there cannot be the least doubt that *iritis serosa* may become transfored into *iritis maligna* by the operation of enucleating tho other eye." Enucleation "may cause sympathetic inflammation in a previously healthy oye, as well as increase a mild inflammation to tho most severe. Enucleation is of no benefit whatever in genuine *iritis maligna*, but occasionally, when tho sympathizer is extremely irritated, does harm." This opinion is defended by the citations of a few undecisive cases. Opposed to Mauthner stands the report of the committee on sympathetic ophthalmitis.[2] In it wo find the following: "When sympathetic inflammation has begun does excision of the exciting eye influence its progress? . . . Of our total (about 200) we find 4 cases in which the exciter was removed within a short time of the outset of sympathetic inflammation (that is, within three weeks of the outbreak of the symptoms of structural disease in the sympathizing eye) and of these the sympathizing eye was known to be lost in only 8. In an almost identical number (65), the exciter was either not removed at all, or not till long after the sympathetic disease had set in, and in no less than 26 of these the sympathizer was lost. . . . Whether early removal of the exciting eye be positively useful in staying the disease or no, it is certainly not injurious, as no less an authority than Mauthner has asserted that it is when sympathetic disease is of the 'serous form.' . . . Recovery of the sympathizer after early removal of the exciter may be in part ascribed to the natural mildness of the disease (in both eyes). . . . Loss of the sympathizer when exciter is not removed may in part be ascribed to the natural severity of the disease (in both eyes). On the other hand the fact that sympathetic ophthalmitis, when it sets in *after* enucleation of the exciting eye, is usually mild seems to show that early removal of the cause does in some degree check the disease."

Schirmer entertains a similar opinion. He says: "If sympathetic inflammation has already broken out, the exciting eye, if blind, should be removed. The removal of the exciting eye has never been proved to have an ill effect on the sympathetic inflammation, but has on the other hand appeared in many

[1] "Sympath. Dis. of the Eye," pp. 157, 159.

[2] Tr. Oph. Soc. U. K., vol. vi., pp. 171–173.

cases to act beneficially in this respect, although the improvement may not be permanent. It is rational to remove the source of the infection, and thereby to obviate the chance of a further migration of germs from one eye to the other; moreover, the enucleation cuts short any sympathetic irritation which may be present, and thereby, in all probability, favors the subsidence of the inflammation."[1]

IV. Curative Treatment, when the Exciter is not Destroyed.—Given a case of sympathetic inflammation in which the exciter retains useful vision, should enucleation be performed? Mauthner[2] replies: "Every one will admit that it is a crime, in a case of pronounced sympathetic irido-cyclitis, to enucleate an eye which still possesses vision, or in which vision might at a later date be restored." Swanzy[3] says: "I would not enucleate the exciting eye, if sympathetic ophthalmitis had already appeared, should the vision of the exciting eye be fairly good. For it often occurs that the process in the sympathizing eye is not arrested by the proceeding, and that, when the latter is not undertaken, the exciting eye turns out in the end to be the organ with the better vision."

Nettleship[4] advises as follows: "The exciting eye, if quite blind or so seriously damaged as to be for practical purposes certainly useless, is to be excised at once, though the evidence of benefit from this course is slender. But it is not to be removed if there is reason to hope for restoration of useful sight in it; if there is simply a moderate degree of subacute iritis, with or without traumatic cataract, and with sight proportionate to the state of the lens, the eye is to be carefully treated, since it may very probably in the end be the better of the two."

Finally, Lawson[5] makes the following observation: "On several occasions, when the injured eye has retained some sight, I have seen the opposite eye destroyed by sympathetic ophthalmia, while the injured eye so recovered that useful sight has been restored, and the patient has been able to get about without assistance. . . . If sympathetic ophthalmia be established, the injured eye should not be removed if it retains any sight." When the sympathizer is lost, it may be enucleated if the exciter

[1] Ophthalmic Review, London, March, 1893, pp. 97, 98.
[2] *Op. cit.*, p. 169.
[3] *Op. cit.*, p. 260.
[4] *Op. cit.*, p. 176.
[5] R. L. Oph. Hosp. Rep., vol. x., p. 5.

retain some vision. For, according to Berry,[1] "cases have been met with when there seems to have been good reason to think it has reacted on the first or original exciter."

In the present state of our knowledge, enucleation must be ranked superior to any of its substitutes in sympathetic disease. The most noteworthy of the substitutes are evisceration, Mules' operation, and optico-ciliary neurectomy. Evisceration is especially favored by Graefe of Halle. The objections to it are, the wound heals more slowly than in the case after enucleation, and the local reaction is more intense. Moreover, the posterior one-half of the sclera of the displaced organ is permitted to remain to form the stump. The operation of inserting a glass sphere into the scooped-out sclera (Mules' operation) is open to the same criticism. Optico-ciliary neurectomy, championed by DeWecker and performed also by Schweigger, consists in the abscission of a segment of the optic and ciliary nerves, leaving the eyeball in the orbit. The focus of the exciting cause therefore is not removed; and, since the mode of propagation of the sympathetic disease is still unknown, this operation should not be as favorably regarded as the others.[2] Undoubtedly there are cases suitable for each of these operations. The question whether, in a given case, one or the other should have been performed can be answered only after consideration of the circumstances which confronted the surgeon. When such heroic measures are indicated, enucleation will give the patient the best chance of a favorable result; and an operator, who elects a procedure other than that in a case of sympathetic inflammation, should be prepared to give a sufficient reason for his choice.

[1] "Dis. of the Eye," 1893, p. 348. [2] Compare Berry, *op. cit.*, p. 350.

CHAPTER VIII.

INJURIES OF THE EAR.

Injuries of the External Ear.

Contusions, contused wounds, incised, punctured, and lacerated wounds, gunshot wounds, and burns of the external ear are occasionally observed. The cartilages may be fractured by a contusion. Destruction of tissue by wounds may be extensive or it may be trifling; it may be an immediate consequence of the injury, or the greatest loss of tissue may ensue from inflammation and gangrene of the affected structures. The auricle has been completely severed from the head.

Even severe wounds of the auricle show a marked tendency to heal kindly. Completely severed parts will occasionally unite if brought into proper coaptation with the wounded member and held there by sutures and carefully applied dressings. Of course this extraordinary result will not be attained if the wound be not thoroughly disinfected and the entrance of microbes into it be not prevented by appropriate antiseptic precautions. On the other hand, not all wounds of the auricle run a favorable course. Inflammation with suppuration sometimes sets in, causing swelling of the ear and adjacent parts, destroying the cartilages to a greater or less extent, and resulting in prolonged annoyance and permanent deformity.

Contusions of the auricle give rise to inflammation of the investing membrane of the cartilages,—the perichondrium. Such inflammation may be productive of abscess and subsequent deformity of the ear. In other cases, contusions are followed by the appearance of a blood tumor of the auricle, known as *othæmatoma*. This tumor is due to extravasation of blood between the perichondrium and the cartilage, or between the perichondrium and the skin, or to extravasations into the substance of the cartilage. Experiments on animals[1] indicate that

[1] Hüttig, Viertelsjahrsschrift für gericht. Med. u. öffentlich. Sanitätswesen, Oct., 1893, 221.

the extravasation may not set in for twenty-four hours, or a longer time. Othæmatoma occurs also as a spontaneous or idiopathic affection. In both the traumatic and the idiopathic cases, the left ear is commonly the site of the trouble; and in both, the tumor is observed almost invariably upon the anterior aspect of the concha. But it has been found on the back side of the external ear. Idiopathic cases are observed among the insane; rare exceptions to this rule have been reported as occurring in sane, but debilitated subjects.

Gruber[1] describes the appearance of idiopathic othæmatoma as follows: It "commences most commonly in the upper part, in the fossa triangularis (fork of the antihelix), or in the upper half of the concha; appearing as a larger or smaller, more or less distinctly fluctuating, circumscribed tumor; the skin covering it being either normal or of a livid red color. The surface is regular and smooth, if the blood has been effused into the subcutaneous areolar tissue; or if, as is often the case, the extravasation has taken place into the substance of the cartilage itself, or between this and the perichondrium, the external surface exhibits more or less definitely the ordinary elevations and depressions of the auricle." In traumatic cases there is no characteristic hemorrhage, but the appearances may be identical with those of the idiopathic variety. Other evidence of injury may be found. Fracture of the cartilages may be noted. But, inasmuch as the cartilages are softened in some idiopathic cases, and fragments of them may be felt beneath the fluctuating swelling, the signs of fracture of the cartilages do not necessarily indicate the nature of the cause of the extravasation.

The subjective symptoms of idiopathic othæmatoma are a feeling of fulness and burning in the auricle. Traumatic cases may give more marked symptoms, especially pain, tenderness, and heat. An abscess forms occasionally. Should the tumor rupture, septicæmia may follow. Cases of that nature have been reported. Both traumatic and idiopathic othæmatomata cause permanent, unsightly deformity of the auricle.

Burns of the external ear by heat or corrosive agents present considerable variety as regards the extent of surface involved and the degree of destruction of tissue. Superficial burns of the auricle heal very satisfactorily, leaving inconspicuous traces

[1] "Dis. of the Ear," N. Y., 1890, p. 221.

behind. Deep burns, however, deform the auricle. The entire external ear may be burned away. When the burn involves the parts surrounding the orifice of the external auditory canal, the resulting cicatrix will close the ear. Such a result will cause deafness. Considerable difficulty would be experienced in attempting to re-establish the opening of the external auditory canal if the cicatrix were not very thin. In some cases, failure would follow every such attempt.

Spontaneous gangrene of the auricle has been observed by Eitelberg,[1] who has reported two cases of it: that of a boy thirteen months old, who suffered also from suppuration of the middle ear and died on the fifth day of exhaustion; and that of a badly nourished girl, three weeks old, in whom the lobule and concha became dark brown, shrunken, and cold (a similar spot was found at the umbilicus).

Injuries of the External Auditory Canal.

The external auditory canal is anatomically divided into two portions, a cartilaginous and a bony. Either, or both, may be injured by direct violence. Lesions of the cartilaginous portion of the canal are of minor importance. They may excite inflammation which will temporarily diminish the acuteness of hearing. Healing occurs, however, in the greater number of cases, with no permanent impairment of the organ. Burns may close the canal permanently by cicatricial contraction, if the lesion be a severe one. Knapp[2] has reported one such case from sulphuric acid. Permanent atresia resulted.

Lesions of the bony portion of the external auditory canal are the result of either direct or of indirect violence. They may be complicated by direct injury to the drum-head and middle ear. Or, injury to the canal may excite an inflammation of the drum-head which will lead to perforation of the latter and suppuration in the middle ear. Hüttig[3] asserts that this result is most common after injury to the superior wall of the canal. The mastoid process may be invaded by inflammation, which sometimes extends to the drum, when the posterior or posterior-superior wall is injured. When the anterior wall is injured, the parotid gland may become inflamed.

[1] Hüttig, *op. cit.*, p. 221. [2] *Ibid.*, p. 224. [3] *Ibid.*, p. 223.

Diffuse inflammation of the canal occurs in consequence of direct injury; but, in general, resolution is perfect, leaving no permanent effects. In other cases, subjective noises and deafness remain. In still other cases, the canal is partially or completely closed by the results of the inflammatory process, thereby affecting the hearing to a marked degree.

Intense inflammation of the external auditory canal has been excited by introducing into it cotton moistened with creosote. Trautmann[1] reported two such cases; in both hearing was temporarily affected. Christinneck[2] reported a case of inflammation following the introduction of concentrated carbolic acid into the canal; healing was complete in two weeks.

Injuries of the external auditory canal occur in consequence of indirect violence. The soft parts have been injured by pulling the ears. The bony walls have been fractured by a blow or a fall upon the head, or by a blow, or a fall upon the chin or lower jaw. When the force is transmitted through the lower jaw, the anterior wall of the canal is fractured, and the lesion may occur in both ears at the same time. Baudrimont[3] observed such a case in which the lower jaw was dislocated backward. After the dislocation was reduced the right drum-head was found badly lacerated; some splinters of the anterior wall were removed, and recovery took place.

When the fracture of the bony walls is *simple*, hemorrhage takes place beneath the soft parts, and blood does not come from the ear. A subcutaneous blood-tumor may form and close the canal. In the case of *compound* fracture of the bony walls the ear bleeds. The hemorrhage may be moderately copious, but soon ceases spontaneously. If, however, there is also a fracture of the base of the skull, the hemorrhage is more persistent, and may become serious enough to require treatment. The jugular vein and the carotid artery may be injured by the fracture. In such cases the bleeding is profuse. When the hemorrhage comes from the carotid, it will prove fatal.

In compound fractures, the lesion may be diagnosticated with the sound before inflammation and swelling set in. Mastication will be painful or impossible in fractures of the anterior wall of the canal.

[1] "Handbuch der gerichtlichen Medicin," von Dr. J. Maschka, Tübingen, 1881, i., 386.

[2] Hüttig, *op. cit.*, p. 224; Archiv f. Ohrenheilk., Bd. 18, S. 291.

[3] Hüttig, *op. cit.*, 227.

Uncomplicated fractures of the canal do not, in general, leave any permanent evil consequences. Protracted inflammation, or caries or necrosis of the bones ensues, in a certain number of cases.

Injuries of the Drum-Head.

Ruptures or perforations of the drum-head are caused by direct or by indirect violence. Direct violence to the drum-head is done by penetration of objects thrust into the ear; by shot wounds; by violently syringing the ear; by surf bathing; by entrance into the ear of molten metals, steam, scalding water, or corrosive agents. Indirect violence to the drum-head is caused by blows upon the ear with the open hand, fist, or missiles; by falls upon the ear; by severe concussion transmitted through the bones of the skull; by intense sounds (explosion of projectiles, great guns, long-continued musketry fire, machine guns, steam whistles, loud voice); by violent traction on the auricle; by sudden condensation of air in the drum as when the ear is inflated with the air douche; by rarefaction of air external to the drum-head as in diving; by entering caissons; by fracture of the temporal bone.[1]

A great variety of things may be thrust into the ear and perforate or rupture the membrana tympani. The membrana may be simply contused by such foreign bodies, and subsequently a perforation result from the inflammation excited thereby.

Destruction of the membrana tympani, together with other serious lesions in the auditory apparatus, has been criminally produced by pouring corrosive liquids or molten metal into the external auditory canal. Even the entrance of cold water into the external auditory canal may excite inflammation and consecutive perforation of the membrana and suppuration in the middle ear.

Indirect violence by blows upon the ear with the open hand or fist has often resulted in rupture of the membrana tympani. Trautmann[2] cites 11 such cases; Sexton[3] refers to 51 cases among his records; other writers refer to similar cases. The violence may be comparatively slight and yet cause rupture of

[1] *Vide* Sexton, "The Ear and its Diseases," 1888, p. 176; also Trautmann, *op. cit.*, 1, p. 392.

[2] *Op. cit.*, p. 400 *et seq.*

[3] *Op. cit.*, p. 177.

the drum-head. Gruber[1] refers to two cases observed by him in which the rupture was caused by a kiss on the ear (rarefaction of the air in the external auditory canal).

The following cases are cited from Sexton:[2]

"That of a young man, aged 22, whose father had given him a blow upon the left ear six years previously. Severe inflammation of the middle ear followed, lasting for two years, during which time the air whistled through a perforation in the drum-head whenever he blew his nose. When seen the drum-head was found thickened, irregular, and otherwise changed almost beyond recognition. Hearing very much impaired.

"A young man was slapped upon the left ear by his father. There was immediate pain and deafness, followed in a few hours by a watery discharge, which afterward was tinged with blood. Two days after the boxing, a perforation in the lower segments of the drum-head was giving vent to a free discharge and the middle-ear inflammation was complicated with periostitis externa—the mastoid cortex being swollen, red, and tender to the touch. Autophonia, noises in the head, and pain occurred at the beginning, and were very distressing for a long time, recovery not taking place for three months.

"The grave consequences of pounding the ear are well shown in the case of a woman addicted to drink, aged 38, who was struck violently by a man upon the right ear. The immediate result was severe dizziness, and she had to hold on to a stair-railing to keep from falling. Vertiginous symptoms became more severe, and the pain and autophonia with this alarmed her very much. She was taken to a dispensary, where an energetic attendant, feeling that something must be done, vigorously inflated the ear by Politzer's method, causing extreme pain in the ear, and afterward introduced some irritating medicament on cotton-wool with instructions to keep it in the ear. After this the pain became more severe, and she came to the Eye and Ear Infirmary, where the drum-head was examined. This was found to be ruptured. An enormous quantity of serous fluid was escaping from the ear, which was believed to consist largely of the water of the labyrinth, thus indicating that the round window had also been ruptured by the blow. She had now become extremely nervous and experienced insane hallucinations, as was confirmed by the physician who saw the case. She was admitted to the wards of the infirmary, and purulent inflammation of the middle ear soon set in. The cerebral symptoms—pain, vertigo, hallucinations, etc.—became more grave. They seemed due in part to the concussion of the blow; but on reviewing the case the author is convinced that there was also transmission of a septic irritant through the cerebro-spinal fluid into the cranial

[1] *Op. cit.*, 257. [2] *Op. cit.*, pp. 178, 179.

cavity, inducing leptomeningitis. The patient left the infirmary before she was well, and when last heard from, a month after the injury, had not recovered."

Falls upon the ear and blows upon the ear with missiles produce ruptures of the membrana similar to those caused by boxing the ears.

Pulling the ears in a violent manner has ruptured the drum-head. The following cases are quoted from Sexton:[1]

"Female, 11 years of age. While playing with some other children in front of a shop, the proprietor ran out and seized the patient by the left auricle, and, during her struggles to escape, the organ was violently wrung and pulled. She cried out with pain, which continued for some time; a discharge appeared the next day, and she was brought a few days afterward, July 14th, 1884, to the New York Eye and Ear Infirmary for relief. An examination of the ear showed that the integument covering the superior wall of the canal and the upper portion of the drum-head was inflamed and exfoliating, and, furthermore, that the membrane was lacerated in several places about the umbo. There was a discharge through the perforations from the drum; also deafness and autophonia.

"The patient was under observation for about seven weeks, after which she failed to return. The drum-head had not then healed, and a purulent discharge from the ear still existed. There was also considerable deafness. On December 4th, 1887, three and a half years after the injury, this patient called on the author, stating that for two or three weeks she had had a good deal of pain and discharge in the right ear. On examining the left (injured) ear, it was found that the drum-head was adherent to the inner wall of the drum; furthermore, that a white cicatrix was present behind the handle of the hammer, which was drawn backward somewhat. The malleus was displaced downward. Anteriorly the drum-head had a little brilliancy. Loud ordinary voice could be heard in the left ear at twenty feet distance. She stated that the left ear had discharged off and on until four months ago; that there was tinnitus resembling musical sounds and intermittent pain in the same ear. She left off going to school six months since, as she was so deaf that she could not understand what the teacher said to her. Patient has many decayed teeth. She works at present in a cigarette factory.

"Male, aged 14 years. Three months ago his brother caught him by the lobule of the left ear, pulling it until some blood escaped from the canal. The ear has discharged ever since, and he only hears shouting voice in that ear. The left drum-head is hyperæmic; the

[1] *Op. cit.*, p. 223.

inner end of the canal, which is large, is red, dry, and exfoliating. A month later, when patient was last seen, the drum-head had healed.

"Male, 23 years old. Two days ago left auricle was seized by the teeth of a man during a fight. The lobule was much torn, and the traction made on the auricle lacerated the superior membranous wall of the canal, where it enters the bony portion. The membrana flaccida was also lacerated at its anterior insertion. The parts were still bleeding, and the neighborhood very much injected. There was no deafness. Patient seen but once."

The following case quoted from Gruber[1] exhibits other consequences of a blow upon the ear than rupture of the drum-head:

"As an example of injury to the ear from a blow, without rupture of the drum-head resulting, a case of Bürkner's[2] may be cited. The patient was knocked down and rendered senseless by a blow from the fist over the ear. On recovering consciousness, two hours later, he had a loud buzzing in the ear, with pain on moving his head to the same side, uncertainty in walking, and dizziness, increased on closure of the meatus. The tympanic membrane was depressed, but otherwise uninjured. All the symptoms disappeared in ten days under treatment by the Politzer process. Bürkner ascribes the symptoms to displacement inward of the membrane and auditory ossicles, especially the stapes, subsequently remedied by inflation."

The following case of rupture of the drum-head by *contre-coup* is taken from Gruber:[3]

"Ruptures of the membrane, brought about by so-called contre-coup, are particularly noteworthy. The author has seen several such cases in Vienna. A young lady, leaving the room, struck her forehead against the door-post, and ruptured her left tympanic membrane; it healed in the course of a week. A young man, while diving, struck his forehead against the bottom of the bath, and ruptured the left drum-head; a severe inflammation was set up, and it was some weeks before it had quite disappeared. Williams[4] oberved a fracture through the external auditory canal, with rupture of the membrane, in a boy who fell on the back of his head. Eitelberg[5] reports a case in which a perforation below the malleus, with fracture of its handle, were said to

[1] *Op. cit.*, p. 258.

[2] "Zur Casuistik der traumatischen und entzündlichen Mittelohraffectionen," Archiv für Ohrenheilkunde, Bd. xv.

[3] *Op. cit.*, p. 259.

[4] "Ein Fall von Fractur des äusseren Gehörganges durch Contrecoup mit Zerreissung des Trommelfelles," Zeitschrift für Ohrenheilkunde, Bd. xiv.

[5] "Bruch des Hammergriffes durch Schlag auf's Ohr," Separatabdruck aus der Wiener med. Presse.

have resulted from a blow upon the ear with the fist; both lesions healed. Kirchner[1] saw several cases of this kind. In a man of 60, who fell with the side of his head against a beam, fracture of the osseous portion of the auditory canal, with rupture of the membrane and fracture of the handle of the malleus, took place. In another case there was fracture of the temporal bone and of the hammer; in this instance the patient had been run over by an engine. He also observed a case where the os tympanicum was broken by the force of the lower jaw in a fall from a considerable height. On recovery, a deep furrow was seen on the anterior and lower surface of the osseous part of the auditory canal, extending as far as the membrane, and a fissure on the posterior wall 1½ mm. long; the membrane also was ruptured. Krakauer saw a fracture of the handle of the malleus which was due to examination of the ear with a sound under a bad light. In the author's collection is a preparation in which, besides a fissure parallel to the long axis of the petrous bone through the whole of the tegmen tympani, there is a tear through the tympanic membrane, with fracture of the handle of the malleus; the head of the malleus is likewise dislocated from the crown of the incus, the latter being untouched. The case was that of a man who fell upon his head from a third-floor flat."

Objective Symptoms.—The position and form of the rupture produced by direct violence vary with the shape and size of the offending body and the direction it takes in traversing the external auditory canal. Punctures and small wounds may not be visible, only a scanty extravasation of blood being found at the site of the lesion. In other cases of direct violence to the drum-head a more or less ragged aperture will be found, having, according to circumstances, greater or less dimensions, and either free or filled with coagulated blood. Fissures resulting from indirect violence have, as a rule, smooth margins and their form is more or less oval. Their edges are white or covered with coagulated blood. After twenty-four hours, the margins become red and swollen, thus narrowing the aperture.

Hemorrhage in these cases is very slight—a few drops only of blood being the limit. If more copious hemorrhage occur, other parts have probably been invaded by the traumatism. Copious hemorrhage is a rare incident.

Air may be forced through the fissure by the Valsalvian method with a sharp piping sound. A snapping noise is heard

[1] Jahresbericht der Würzburger otiatrischen Poliklinik, 1884–85; ferner, Bericht aus der otiatrischen Section der 59 Versamlung deutscher Naturforscher und Aerzte, Berlin, 1886.

at the time of injury when the membrana tympani is broken through by direct violence.

Subjective Symptoms.—Pain, especially severe in cases of direct injury, is usually experienced, but it may not be noted. As a rule, it subsides in a few hours, but will continue if inflammation supervene. Loss of consciousness for a few minutes commonly ensues from direct violence. Attacks of fainting may be repeated; and convulsions sometimes occur. Vertigo, autophonia, tinnitus aurium, and deafness are quite constant. Hearing, instead of being dulled, may be rendered abnormally acute, so that certain sounds are distressing to the patient. The perception of the direction of sounds is lost. The tuning-fork is heard best by bone conduction on the injured side.

Healing of uncomplicated fissures, due to indirect violence, occurs early—in from three to seventeen days, but may be prolonged to six weeks.[1] Those due to direct violence heal more slowly, according to the size and characteristics of the rupture. According to Trautmann, fissures do not leave a visible scar. Inflammation, suppuration in the lesion, and invasion of the middle ear by suppurative inflammation complicate some cases. The shape of the fissure will become more rounded if suppuration occur. Syringing and inflating such injured ears will retard the reparative process, and excite suppurative inflammation. Cold air blowing into the ear will produce the same effect. The aperture does not always close; especially is this true if suppurative inflammation have occurred. Relapses of this inflammation are often observed. And so long as the ear is discharging pus, the life of the patient is endangered, by virtue of the possible occurrence of meningitis, or of abscess of the brain, or of septic thrombosis of one of the sinuses.

Hearing is commonly restored when healing is complete; but in some cases it remains more or less impaired. An aperture through the drum-head does not necessarily diminish the acuteness of hearing.

Imprudence on the part of the patient will have an evil influence on the healing of the injured drum-head. And pre-existing disease of the ear will operate as a predisposition to protracted healing and complicating inflammatory disturbances.

[1] Trautmann, *op. cit.*

The question arises, naturally, whether the rupture of the drum-head or the suppurative inflammation of the middle ear is due to traumatism or not. It is well known that both occur without injury of any sort. As regards the causation of rupture, it can only be certainly attributed to injury when extravasations of blood are discovered in the drum-head, or when there is found evidence of hemorrhage in the margins of the fissure or in their immediate vicinity.[1] A probable diagnosis of the causation of the conditions may be made, however, in other cases. The relationship between an injury and suppurative inflammation involving the middle ear may be pronounced upon with certainty only, when the development of the various stages of the ear trouble has taken place under the eye of a competent observer. If the examination have been made first after the suppuration has set in, and if other traces of an injury be discovered, it is probable that the injury was the cause of the ear disease, and, indirectly, of the death of the patient. If, however, other traces of injury are wanting, it is not possible, after suppuration has set in, to state positively, on the strength of the objective evidence, that trauma and suppuration bear to one another the relationship of cause and effect.[2]

Injuries of the Drum.

The structures in the middle ear, *e.g.*, the ossicles of the ear, the chorda tympani and the facial nerve, the intrinsic muscles of the ear, the mucous lining of the cavities and their bony walls, may be directly injured by the entrance of such objects as have caused rupture of the drum-head by direct violence. Being the most exposed of the ossicles, the malleus, especially the handle of the malleus, is most frequently injured. Fracture of the handle of the malleus has been reported by a number of observers. In Ménière's case[3] the twig of a tree entered the external auditory canal, ruptured the membrana and fractured the malleus. Healing occurred without treatment. Von Tröltsch[4] saw the case reported by him after the fracture had united. The injury was done by a penholder which was driven

[1] Hüttig, *op. cit.*, p. 43.
[2] *Ibid.*, p. 203.
[3] Trautmann, *op. cit.*, 405, M. Gaz. médicale de Paris, 1856, No. 50.
[4] Trautmann, *ibid.*; von T., "Lehrbuch der Ohrenheilkunde," 1877, p. 149.

into the ear acidentally. Hearing was blunted and the patient complained of noises in the ear. In Weir's case, the fracture of the handle of the malleus had not united four months after injury. The patient gave a history of having fallen into an open areaway about fifteen feet. He was unconscious about sixteen hours. He had been informed that the right ear had bled for about an hour. He experienced pain in the right ear, forehead, and other ear for about a month; and great tinnitus, which remained unabated since the injury. There was no history of entrance of a foreign body into the ear. The watch was heard on affected side when pressed upon the ear. The drum-head was normal in color; there was an irregularity in the handle of the malleus. The bone was found to be fractured a short distance below the short process. The broken ends were completely and transversely displaced. Reposition of the ends of the fragments took place when the ear was inflated by Valsalva's method, but soon became displaced again. Two of Dr. Weir's colleagues were of the opinion that a faint, whitish line posterior to the malleus might be a cicatrix from a laceration of the drum-head. Patient was not seen again.[1] Hepburn reported a case of rupture of the drum-head and of fracture of the handle of the malleus due to thrusting a hair-pin into the ear. Hearing-distance, watch, one-half inch. Seven months later, necrosis of the fragments was observed.[2]

Severe injury to the ear, and other more serious consequences, have been produced by pouring corrosive liquids and molten metals into the ear. Trautmann[3] cites the following cases of that nature:

Morrison's[4] case, of a man who poured nitric acid into his wife's right ear while she was lying in a drunken slumber. Hemorrhage, violent inflammation, paralysis of the right side of the body, and death in six weeks, were the consequences. Caries of the petrous portion of the temporal bone and meningitis were found at the autopsy.

Rau's[5] case, in which melted lead was poured into the right ear of a drunken man; causing deafness, purulent discharge,

[1] Roosa, "Dis. of the Ear," N. Y., 1891, p. 277.

[2] Burnett, "Dis. Ear, Nose, and Throat," vol. i., p. 266; Trans. Amer. Otol. Soc., vol. i., 1870.

[3] *Op. cit.*, p. 387.

[4] Dublin Journal of Medical Science, vol. ix., No. 15.

[5] Med.-chirurg. Zeitung, 1852, 39.

paralysis of the corresponding half of the face. The lead was so firmly embedded that seventeen months later it could not be removed.

Ostander's[1] case, of an English woman who murdered six husbands by pouring molten lead into the ear. She was detected in the seventh attempt.

Taylor's[2] case, in which a mother poured molten metal (seven parts tin and three parts lead) into the right ear of her idiotic son to destroy his life. Violent pain and great inflammation ensued, but finally recovery took place.

Toynbee's[3] case exhibits the results of a traumatism of the middle ear involving the chorda tympani. The twig of a tree penetrated the patient's right ear. There was very severe pain, some bleeding (blood is said to have run from the ear), subjective noises, deafness, and, when the ear was inflated by the Valsalvian method, air passed through the drum-head. Seven days later some clotted blood was found in the external auditory canal. A fissure was found in the drum-head behind and parallel with the handle of the malleus. Its margins were red and swollen. Nine days later the fissure was healed, the subjective noises had diminished, and, the hearing had improved. Four days after the injury the patient had the feeling that a cold body had been rubbed over the right half of his tongue, and the sense of taste was diminished on the affected side. Klaatsch had also observed the sensation of cold in the tip of the tongue.

Commenting on this case Trautmann states that "patients in whom he has accidentally severed the chorda tympani in puncturing the drum-head give different replies: some state that they experience a sticking, prickling sensation with a metallic or sour taste on the affected half of the tongue, especially along its edge. Von Tröltsch, Neumann, and others have noted the prickling sensation on the edge of the tongue. In another case a sense of smoothness on the affected half of the tongue lasted six days. The sensation had been experienced immediately after division of the nerve, and disappeared absolutely, leaving nothing abnormal behind. Blunting of the sense of taste and anomalies of the secretion of saliva are frequently ob-

[1] "Ueber den Selbstmord," S. 395.

[2] "Med. Jurisprudence," London, 1861.

[3] Trautmann, *op. cit.*, 405, "Die Krankheiten des Gehörorgans," übers. von Moss, 1863, S. 180.

served. In many cases, these characteristic symptoms of injury to the chorda tympani were accompanied by a sudden, almost lightning-like movement of the head, mouth, and tongue. The head, affected as it were by electric shocks, is drawn slightly toward the affected side, as are also the corner of the mouth and the tongue, which is slightly protruded. In large perforations of the membrana which lay bare the chorda tympani, these symptoms may be induced by touching the nerve with a sound."

Direct violence to the middle ear has been done by the attending physician in attempting to extract a foreign body from the external auditory canal. The foreign body has been forced into the middle ear through a drum-head lacerated by the unskilful manipulations. A foreign body lodged in the middle ear causes suppurative inflammation, and may excite grave complications in the brain—meningitis, abscess, and thrombosis of the sinuses. Headache, vertigo, epilepsy, and mental disturbances of a serious nature sometimes occur in the non-fatal cases. Not only have foreign bodies lodged in the external auditory canal been forced into the middle ear, but methods adopted for their extraction have led to perforation of the skull, laceration of the brain, and death of the victim. Worse than this has happened. Misguided by the statements of the patient or his friends regarding the presence of a foreign body in the external auditory canal, physicians have searched so unskilfully that not only has the drum-head been lacerated and removed, but the ossicles of the ear have been torn out, and even the walls of the middle ear have been perforated and the brain injured in the vain hunt for a thing that did not exist. Ordinarily, removal of foreign bodies from the ear may be accomplished without injury to the organ, by simply syringing the ear. Whenever it becomes necessary to resort to other measures than that, it is best for the patient that the case be referred to a competent specialist in aural surgery, or that the foreign body be allowed to remain in the ear. In a certain number of cases it may do no harm if allowed to remain in its bed unmolested.

Injury to the middle ear by indirect violence occurs by virtue of shocks to, or blows upon, the head, falls upon the knees, gunshot wounds in the immediate vicinity of the ear, violent vomiting and coughing, forcible inflation of the ear, and falls upon the chin. In consequence of such injuries, hemorrhage

into the drum has taken place to an extent sufficient to cause deafness, noises and pressure sensations in the ear, and vertigo. Loss of consciousness and vomiting signify the coexistence of concussion of the brain. Eventually—after some weeks or months—the effused blood will be absorbed and the function of the organ restored. Sometimes suppuration, with perforation of the drum-head, occurs. In other cases, inflammation of the middle ear without suppuration ensues. When inflammation of the middle ear ensues, whether suppuration occur or not, the probability that the function of the organ will ever be restored is proportionately lessened; but it is not always impossible to restore such organs to their normal function.

The drum is injured indirectly by such causes as effect a fracture of the base of the skull. The characteristic symptoms are those of fracture of the base of the skull, viz., marked hemorrhage from the ear, escape of cerebro-spinal fluid from the ear, and, in exceptional cases, escape of brain matter through the external auditory canal. Even in such cases, death is not inevitable.

The mastoid process is occasionally injured by heavy blows and gunshot wounds. Dupuytren[1] reported a case in which the mastoid was torn away from the skull. As a rule, the injuries cause fissure or splintering of the bone. They heal kindly, in some cases; in others, necrosis of the bone occurs; in still other cases, death follows from consecutive meningitis.

"In gunshot wounds, which involve the mastoid only, or the adjacent bones and soft parts also, the ball may become encapsulated and excite no further disturbance; yet in other cases, if the missile press upon the sterno-cleido muscle, neuralgia and interference with the movements of the neck may bother the patient."[2] Absolute deafness is the consequence of gunshot wounds of this region, in nearly all cases.

Injuries of the internal ear and auditory nerve are due either to direct or to indirect violence. In the former set of cases, the direct injury involves, almost without exception, other structures within the cranium and terminates fatally. In the latter, when the internal ear and the auditory nerve *only* are indirectly injured, the objective symptoms are not sufficiently positive to base a diagnosis upon them. Thus is afforded a

[1] Hüttig, *op. cit.*, Jan., 1894, p. 25. [2] *Ibid.*, p. 25.

favorable opportunity for malingering. And, inasmuch as it is not possible objectively to differentiate between a malingerer and a truthful patient in this class of cases, on account of the absence of objective evidence, discussion of the subject is postponed until our knowledge of these injuries is more satisfactory. The reader is referred, however, to the writings of Trautmann and Hüttig for a discussion of that class of injuries.

THE MEDICO-LEGAL RELATIONS

OF

INSURANCE.

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THE MEDICO-LEGAL RELATIONS OF INSURANCE.

Scope of the Article.—Only a small number of questions in distinctive insurance law involve any essential relation to medicine, and these concern exclusively life, health, and accident insurance. The following subjects will be treated in this article: Powers and Duties of Medical Examiners for Life Insurance; Proofs of Death; Definitions of Terms of Medico-legal Significance Used in Insurance Policies.

The trials of insurance causes frequently require expert medical testimony. The subject of medical expert testimony in general is considered elsewhere in this treatise.[1] For discussions of the causes of death, often an issue in insurance cases, and for the effects of insanity on insurance, consult the respective articles in this work.[2]

POWERS AND DUTIES OF MEDICAL EXAMINERS FOR LIFE INSURANCE.

The universal life insurance practice requires an examination of the person of an applicant for insurance by a physician employed by the insurer. Generally the medical examiner also puts to the applicant certain questions contained in a blank form furnished by the company, designed to test the applicant's desirability as a risk, and he records the answers on the blank, which the applicant signs. Very frequently these answers are made a part of the policy and declared to be warranties, and the courts construe them as having the force of warranties, for the truth of which the insured is wholly responsible.[3]

[1] Vol. I., pages 49–72.

[2] Medico-Legal Autopsies, Vol. I., page 831; Personal Identity, Vol. I., page 865; Determination of the Time of Death, Vol. I., page 919; Death by Heat and Cold, Vol. I., page 939; Death from Starvation, Vol. I., page 975; etc., etc., all of which may be of great assistance in insurance cases; also the Effects of Insanity on Insurance, Vol. III., page 373; and the subject of Poisons, treated in Vol. IV.

[3] See the excellent discussion of this subject in Cooley's Briefs on the Law of Insurance, Vol. III., pp. 1931–1963. It falls outside the scope of this treatise.

The relation of physician and patient of course does not arise between the medical examiner and the applicant for insurance. Hence no legal privilege or rule of confidential communications binds the examiner not to testify as to facts learned from the examination. Sound professional ethics doubtless inculcates, however, discreet silence as to the circumstances of an examination for insurance; they should remain confidential with the physician, the insured, and the insuring company.[1]

Medical Examiner the Agent of the Insurer.—In the very nature of things[2] the medical examiner is the agent of the insurer.

The fact that he has been employed by the company to make the examination and to take down the answers to the questions controls the legal relations between him, the company, and the applicant.[3] Some companies in drawing their policies have included a stipulation, repeated in the application, that for the purpose of recording the answers the medical examiner shall be the agent of the insured. But the courts have held quite uniformly to what may be called a doctrine of immutable agency. Such a stipulation is of no effect because it agrees to a legal impossibility; the facts unalterably establish an agency between the company and the examiner.[4]

It follows from such agency that the company is responsible for the acts of its medical examiner in taking down the answers of the applicant, and if a mistake, misinterpretation, or intentional error be made in recording them, provided the insured stated the truth[5] and did not read over the answers as written, thus making the misstatement his own,[6] the policy issued is

[1] *Cf.* Sullings *v.* Shakespeare, 46 Mich., 408, 41 Am. Rep., 166, 9 N. W. R. 451; Loudoun *v.* 8th Avenue Railway Co., 16 App. Div. (N. Y.), 152, 44 Supp., 742; Roberson *v.* The Rochester Folding Box Co., 171 N. Y., 538.

[2] Sternaman *v.* Metropolitan Life Insurance Co., 170 N. Y., 13, 62 N. E. R., 763, 88 Am. St. Rep., 625, 67 L. R. A., 318; Franklin Life Ins. Co. *v.* Galligan, 71 Ark., 295, 73 S. W. R., 102, 100 Am. St. R., 73.

[3] Sternaman *v.* Metropolitan L. I. Co., *supra;* Howe *v.* Provident Fund Soc., 7 Ind. App., 586, 34 N. E. R., 830; Coles *v.* Jefferson Ins. Co., 4 W. Va., 261, 23 S. E. R., 732.

[4] Cases last cited; also Providence Savings Life As. Soc. *v.* Reutlinger, 58 Ark., 528, 25 S. W. R., 835.

[5] Mutual Reserve Fund Life Ass'n *v.* Farner, 65 Ark., 581; 47 S. W. R., 850; Michigan Mut. Life Ins. Co. *v.* Leon, 138 Ind., 636; 37 N. E. R., 584; Marston *v.* Kennebec Mut. Life Ins. Co., 89 Me., 266, 36 Atl. R., 389, 56 Am. St. R., 412; Otte *v.* Hartford Life Ins. Co., 88 Minn., 423, 93 N. W. R., 608, 97 Am. St. R., 532; Grattan *v.* Metropolitan Life Ins. Co., 92 N. Y., 274, 44 Am. Rep., 372.

[6] Pottsville Mut. Fire Ins. Co. *v.* Fromm, 100 Pa., 347; Mattson *v.* Modern Samaritans, 91 Minn., 434, 98 N. W. R., 330; but see Phenix

nevertheless binding on the company.[1] Decisions vary as to the degree of care required of the insured to see that his answers are correctly set down.[2] But it seems to be well settled that where the applicant is not required to read over the blank when filled out, and merely signs it, he is not bound by inaccurate transcriptions of his truthful answers; at least, not unless the errors are afterward included in the policy when delivered, and moreover are in some sufficient manner called to his attention.[3] It will thus be seen that the law fastens complete responsibility upon the medical examiner to state fairly and accurately the substance of an applicant's statements concerning his health and health history. If, however, the insured connives with the examiner to make an untrue report of his answers, this fraud is of course a defence to an action on the policy.[4]

Another question which sometimes arises concerns the effect of knowledge on the part of the company's agent, as its medical examiner, that statements contained in an application are untrue. If these statements are in a given case mere representations and the medical examiner knows facts to the contrary of them, there is no doubt that the company waives the untruth of

Ins. Co. of Brooklyn *v.* Weeks, 45 Kan., 751, 26 Pac., 410.

[1] Cases cited in last three notes; also Leonard *v.* State Mutual Life Ins. Co., 24 R. I., 7, 51 At. R., 1049, 96 Am. St. Rep., 698; Mut. Life Ins. Co. *v.* Selby, 72 Fed., 980, 19 C. C. A., 331, 44 U. S. App., 282; Mutual Reserve Fund Life Ass. Co. *v.* Farner, 65 Ark., 581, 47 S. W. R., 850; Prudential Ins. Co. *v.* Haley, 91 Ill. App., 363; Shotliff *v.* Modern Woodmen of Am., 100 Mo. App., 138, 73 S. W. R., 326; Connecticut Gen. Life Ins. Co. *v.* McMurdy, 89 Pa., 363; Equitable Life Ins. Co. *v.* Hazlewood, 75 Texas, 338, 12 S. W. R., 621, 16 Am. St. Rep., 893, 7 L. R. A., 217. But see, holding that parol evidence is not admissible, that the application, made part of the contract, does not correctly show the answers, McCoy *v.* Metropolitan Life Ins. Co., 133 Mass., 82; Thomas *v.* Commercial Union Ass. Co., 162 Mass., 29, 37 N. E. R., 672, 44 Am. St. Rep., 323; and holding that the application, when made part of the contract, must first be reformed in an action in equity, Martin *v.* Insurance Co., 57 N. J. Law, 623, 31 Atl. R., 213.

[2] Ryan *v.* World Mut. Life Ins. Co., 41 Conn., 168, 19 Am. Rep., 490; Otte *v.* Hartford Life Ins. Co., 88 Minn., 423, 93 N. W. R., 608, 97 Am. St. Rep., 532; Dowling *v.* Merchants' Ins. Co., 168 Pa., 234, 37 Atl. R., 988; Hartford Life and Annuity Ins. Co. *v.* Gray, 91 Ill., 159; Quinn *v.* Metropolitan Life Ins. Co., 10 App. Div. (N. Y.), 483, 41 Supp., 1060; Keystone Mut. Ben. Ass'n *v.* Jones, 72 Md., 363, 20 Atl. R., 195; Virginia Fire and Marine Ins. Co. *v.* Morgan, 90 Va., 290, 18 S. E. R., 191.

[3] New York Life Ins. Co. *v.* Fletcher, 117 U. S., 519, 6 Sup. Ct. R., 837, 29 Lawyers' Ed., 934; Leonard *v.* State Mutual Life Ass. Co., 24 R. I., 7, 51 Atl. R., 1049, 96 Am. St. R., 698.

[4] Reynolds *v.* Iowa and N. Ins. Co., 80 Iowa 563, 46 N. W. R., 159; Speiser *v.* Phoenix Mut. Life Ins. Co., 119 Wis., 530, 97 N. W. R., 207; Rockford Ins. Co. *v.* Nelson, 65 Ill., 415.

the statements. It cannot be said that it relies on them, and hence their falsity will be no defence to the policy.[1] When the statements, by the clear intention of the contract, amount to warranties, a more difficult question arises; on the whole, the weight of authority appears to be that the same rule does not apply. A company can accept the premium payment from an applicant for insurance and insure him without waiving the defence of false warranty, although its agent knows the falsity of the warranty at the time.[2] And such knowledge is not in any case imputable to the company unless it exists at the time in the mind of the particular agent whose business it is to obtain the warranties or to deliver the policy. "It is a fundamental principle in the law of agency that for information given an agent to be attributable to his principal the information must be imparted to the agent in the course of his agency."[3]

The medical examiner must, if the questions on the application blank are worded inadequately to draw out all the information desired, supplement them with further inquiries. Thus

[1] Endowment Rank, K. of P., *v.* Cogbill, 99 Tenn., 28, 41 S. W. R., 340; National Fraternity *v.* Karnes, 24 Tex. Civ. App., 607, 60 S. W. R., 576 (only facts learned on the examination).

[2] Any discussion of the nature of warranties in insurance lies beyond the scope of this article. The statement in the text is borne out by: Kenyon *v.* Knights Templar and M. M. A. Ass'n, 122 N. Y., 247, 257: "The cases in which knowledge of the agent through whom insurance is taken may operate to defeat the right of the company to avail itself of the fact so known, at the time it is taken, are those in which there is no application (warranty) signed by the assured stating to the contrary of such existing fact, but rests upon a condition expressed in the policy merely. Then it may be presumed that the statement of it in the policy as required by the condition was omitted by mistake or waived." And see Foot *v.* Aetna Life Ins. Co., 61 N. Y., 571. But the following language from Sternaman *v.* Metropolitan Life Ins. Co., 170 N. Y., 13, 23, 62 N. E. R., 763, 88 Am. St. R., 625, 67 L. R. A., 318, a case relating to statements negligently taken down by the medical examiner, certainly is broad enough to cover knowledge contrary to a warranty: [The Company] "could not take the money of the insured while he lived, and, when he was dead, claim a forfeiture on account of what it knew at the time it made the contract of insurance, for that would be fraud." And indeed, if knowledge of the medical examiner or other agent is ever to be imputed to the company at all, it would seem that it ought to be imputed in the conceivable case where a medical examiner knows facts about the applicant's health directly contrary to his innocently made warranties. Perhaps the law will be held ultimately to be that where a warranty is innocently false, the agent's knowledge will be imputed; but if knowingly false, the courts will not aid the insured even though the agent knew its falsity; collusion of the agent with the insured might then almost be presumed.

[3] Butler *v.* Michigan Mutual Life Ins. Co., 184 N. Y., 337, 340; Caruthers *v.* Kansas Mutual Life Ins. Co., 108 Fed., 487.

where the question was asked whether the applicant had had any sickness or disease during the last ten years and he replied that he had had typhoid fever nine years before, it was held that if information of other diseases or of all the diseases from which the applicant had suffered was desired, the medical examiner was bound to ask for it.[1] The duty of the applicant is in general satisfied by his giving frank answers to the questions as put to him.[2]

PROOFS OF DEATH.

The physician who attended the last illness of a person deceased frequently is called upon to make proof of the death, in the form of an affidavit or certificate to be submitted to the insurance company, or in the form of testimony on the trial of a contested insurance case. The method of making proof to be submitted to the insurer is ordinarily determined by the policy itself, which should always be consulted. Proofs of death so prepared in accordance with the policy are admissible on the trial of a case as some evidence of the cause of death, but they are not conclusive.[3] As a rule the beneficiary may on the trial show by parol testimony that the proofs submitted were erroneous.[4]

The family physician's certificate of death, adhered to by him in his testimony, is entitled to just the weight which the jury concludes should be given to the opinion of a learned physician, who saw deceased shortly before his death, and had personal knowledge of him for some time before.[5]

[1] Dilleber *v.* Home Life Insurance Co., 69 N. Y., 256, 25 Am. Rep., 182; Mutual Res. Fund Life Asso. *v.* Sullivan (Tex. Civ. App.),29 S. W. R., 190.

[2] Mutual Benefit Life Ins. Co. *v.* Wise, 34 Md., 582; Rawls *v.* American Mutual Life Ins. Co., 27 N. Y., 287, 84 Am. Dec., 280.

[3] Hanna *v.* Connecticut Mutual Life Ins. Co., 150 N. Y., 526, 44 N. E. R., 1099; Knights Templars and Masonic Life Indemnity Co. *v.* Crayton, 209 Ill., 550, 70 N. E. R., 1066; Mutual Life Ins. Co. *v.* Stibbe, 46 Md., 302; Modern Woodmen *v.* Kozak, 63 Neb., 146, 88 N. W. R., 248; Bentz *v.* Northwestern Aid Ass'n, 40 Minn., 202, 41 N. W. R., 1037, 2 L. R. A., 784. Held inadmissible in behalf of beneficiary in Aetna Life Ins. Co. *v.* Kaiser, 115 Ky., 539; Cook *v.* Standard Life and Acc. Ins. Co., 84 Mich., 12, 47 N. W. R., 568. Otherwise as to the vital statistics of the Board of Health, Buffalo Loan, Trust and Safe Deposit Co. *v.* Knights Templar and M. M. A. Ass'n, 126 N. Y., 450, 458, 27 N. E. R., 942, 22 Am. St. R., 839; or the minutes of a coroner's inquest, Louis *v.* Conn. Mut. L. Ins. Co., 58 App. Div. (N. Y.), 137.

[4] Cases cited and John Hancock Mut. Life Ins. Co. *v.* Dick, 117 Mich., 518, 76 N. W. R., 9, 44 L. R. A., 846; Denver Life Ins. Co. *v.* Price, 18 Colo. App., 30, 69 Pac. R., 313,

[5] Aetna Life Ins. Co. *v.* Ward, 140

DEFINITIONS OF TERMS OF MEDICO-LEGAL SIGNIFICANCE USED IN INSURANCE POLICIES.

Determinations by courts of law of such purely diagnostical questions as what is pneumonia, or what is a disease of the respiratory organs, made upon the trial of insurance causes, need not be collated in this article. Some other terms, however, have a more distinctively medico-legal character, either in view of the context in which they are employed in policies of insurance, or by reason of the fact that their definition involves questions which while demanding medical knowledge do not arise except in connection with the law of insurance. Policies of life and accident insurance frequently exempt the insurer from liability for death of the insured from certain excepted causes, and assume liability for certain specified risks. Life policies are also invariably issued upon the applicant's representations or warranties as to his health. The terms defined below are mainly of these classes. The citation of cases is intended to be illustrative and not exhaustive.[1]

Accident.—Usually employed in accident policies in the phrase, death or injury "by external, violent, and accidental means." The term is to be construed as meaning an event which takes place without one's foresight or expectation.[2] Unforeseen, unexpected, and unthought-of occurrences are accidents.[3] "An injury may be said objectively to be accidental, though subjectively it is not, and if it occurs without the agency of the insured, it may logically be termed 'accidental,' though it was brought about designedly by another person."[4] The term accident itself imports an external, violent agency.[5] Injury resulting naturally from usual and ordinary acts of the insured is not an accident; *e.g.*, rupture from closing a window;[6] rupture of a

U. S., 76, 11 Sup. Ct. R., 720, 35 Lawyers' Ed., 371.

[1] See the excellent encyclopædia "Words and Phrases Judicially Defined," for numerous citations of cases.

[2] Supreme Council Order of Chosen Friends *v.* Garrigus, 104 Ind., 133, 3 N. E., 818, 54 Am. R., 298.

[3] Breed *v.* Glasgow Ins. Co., 92 Fed., 760, 764; *cf.* United States Mut. Acc. Ass'n *v.* Barry, 131 U. S., 100, 9 Sup. Ct., 755, 33 Lawyers' Ed., 60.

[4] Fidelity and Casualty Co. *v.* Johnson, 72 Miss., 333, 17 So. R., 2, 3, 30 L. R. A., 206, citing Biddle on Ins., Vol. 2, p. 780. But see Gaines *v.* Fidelity and Casualty Co., 111 App. Div. (N. Y.), 386.

[5] Bacon *v.* United States Mutual Acc. Ass'n, 123 N. Y., 304, 25 N E. R., 399, 20 Am. St. R., 748, 9 L. R. A., 617.

[6] Feder *v.* Iowa State Trav. Men's Ass'n, 107 Iowa, 538, 78 N. W. R., 252, 70 Am. St. R., 212, 43 L. R. A., 693.

blood-vessel affected with arterial selerosis caused by regular work at the trade of earpenter;[1] hemorrhage of a consumptive caused by the exertion of elosing a railway ear window.[2] Sunstroke is not an accident, for it is not really a "stroke" at all but a disease of the brain. In a leading English case so deciding, Coekburn, C. J., well said:[3] "It is difficult to define the term 'accident,' as used in a poliey of this nature, so as to draw with perfect accuraey a boundary-line between injury or death from aceident, and injury or death from natural eauses, such as shall be of universal applieation. At the same time we think we may safely assume that in the term aceident as so used, some violence, easualty, or *vis major* is neeessarily involved. We eannot think disease produced by the aetion of a known eause ean be eonsidered as aeeidental."[4] The distinetion is clearly brought out in a border-line case in the United States Cireuit Court,[5] in whieh death resulted from the bursting of a blood-vessel during exereise with Indian elubs, and the court laid down as the law of the ease that if the deeeased had used the elubs in the ordinary way and there had been no unusual eireumstanees, it was not an accident; but if there oeeurred any unforeseen, abnormal, or involuntary movement or torsion of the body, then the injury was an aceident. In a singular ease it was held that inadvertently resting the head upon the hand while sleeping, in sueh a way as to eause serious inflammation of the periosteum of the metacarpal bones, was an accidental injury.[6] Poisoning inadvertently, as by swallowing or inhaling a toxie substance, has been held to be, and not to be, by external, violent, and aecidental means.[7] So also death by drowning is by such means.[8]

[1] Niskern *v.* United Brotherhood of C. and J. of A., 93 App. Div. (N. Y.), 364. See also Southard *v.* Railway Passengers' Ass'n Co., 34 Conn., 574.

[2] Feder *v.* Iowa State Traveling Men's Asso., 107 Iowa, 538, 78 N. W. R., 252, 70 Am. St. R., 212, 43 L. R. A., 693. But see Standard Life and Acc. Ins. Co. *v.* Schmaltz, 66 Ark., 588, 53 N. W. R., 49, 74 Am. St. R., 112.

[3] Sinclair *v.* Maritime Passenger Assur. Co. (Eng.), 3 El. and El., 478, 4 L. T. (N. S.), 15, 30 L. J. (Q. B.), 77, 7 Jur. (N. S.), 367.

[4] Dozier *v.* Fidelity and Casualty Co., 46 Fed., 446, 13 L. R. A., 114, 581, 22 L. R. A., 620; Railway Offieials', etc., Asso. *v.* Johnson, 109 Ky., 261, 95 Am. St. R., 370.

[5] McCarthy *v.* Travelers' Ins. Co., 8 Bissel's U. S. C. C. Rep., 362, Fed. Cas. No. 8,682.

[6] Aetna Life Ins Co. *v.* Fitzgerald, 165 Ind., 317, 75 N. E. R., 262, 1 L. R. A. (N. S.), 422.

[7] Healey *v.* Mutual Ace. Assn., 133 Ill., 556, 25 N. E. R., 52, 23 Am. St. R., 637, 9 L. R. A., 371; Paul *v.* Travelers' Ins. Co., 112 N. Y., 472; *contra*, Polloek *v.* U. S. Mut. Ace. Assn., 102 Pa. St., 330.

[8] Winspear *v.* The Accident Ins.

On the other hand, death from contact with putrid substances containing virulent bacilli was held to be from disease and not from accident.[1]

Affection.—See Disease.

Attendance by Physician.—See Medical Treatment.

Breaking of Limb.—This has been judicially defined to mean any actual fracture. Where a policy allowed a benefit for the breaking of the shafts of *both* bones between the knee and ankle-joints, it was held not to include thereby "Pott's fracture," *i.e.*, the breaking of one bone between the knee and ankle and the dislocation of the other.[2]

Disease.—One of the required representations or warranties in a life policy is whether the insured has had certain kinds of diseases. By this term mere temporary ailments are not intended.[3] For example, "spitting of blood" means the *complaint* of spitting blood, not a mere isolated instance.[4] Even when a warranty is made that the insured has not had certain diseases, it usually means, according to the strongest authority, not to his knowledge, and does not include an obscure disease undiscoverable even by medical diagnosis.[5] For the distinction between accident and disease as a cause of death, see Accident.

Epidemics.—Where a policy excluded the risk of death from an epidemic, the word was held to have "its plain, ordinary, and popular sense as a familiar word in our language," and not the technical medical meaning laid down in Copeland's Medical Dictionary, title, "Epidemics." The court adopted the Webster definition—a disease generally prevailing, affecting great numbers. And it was held that the yellow fever was not epidemic in Havana when there were only the usual number of cases, viz., 500 to 1,000 deaths annually.[6]

External, Violent, and Accidental Means.—See Accident.

Co. (Eng.), L. R. 6 Q. B. D., 42; London *v.* Preferred Acc. Ins. Co., 43 App. Div. (N. Y.), 487.

[1] Bacon *v.* United States Mut. Acc. Ass'n, 123 N.Y., 304, 25 N. E. R., 399, 20 Am. St. R., 748, 9 L. R. A., 617.

[2] Petersen *v.* Modern Brotherhood of Am., 125 Iowa, 562, 101 N. W. R., 289, 67 L. R. A., 631.

[3] Cushman *v.* United States Life Ins. Co., 70 N. Y., 72.

[4] Dreier *v.* Continental Life Ins. Co., 24 Fed., 670; Schmitt *v.* Michigan Mut. Life Ins. Co., 101 App. Div. (N. Y.), 12. *Cf.* Connecticut Mut. Life Ins. Co. *v.* Union Trust Co., 112 U. S., 250, 5 Sup. Ct., 119, 28 Lawyers' Ed., 708.

[5] Moulor *v.* American Life Ins. Co., 111 U. S., 335, 4 Sup. Ct., 266, 28 Lawyers' Ed., 447; Grattan *v.* Metropolitan Life Ins. Co., 92 N. Y., 275, 280.

[6] Pohalski *v.* Mutual Life Ins. Co.,

External and Visible Sign of Injury.—When this sign has been required as the condition of liability under a policy the courts have been inclined to construe slight signs as sufficient. The requirement is satisfied by the death of the insured;[1] and by pallor;[2] by discoloration of a member, showing within a reasonable time after the accident;[3] by an emanation of gas from the lungs of a person killed by the inhalation of illuminating-gas.[4] *Cf.* Visible Sign of Injury.

Habits.—Policies sometimes require the insured to state whether he has habits of using intoxicants or narcotics, and sometimes also restrict the liability of the insurer if the insured shall thereafter acquire such habits. Habitually excessive or intemperate use of an intoxicant or drug means uncontrolled use, daily or often;[5] but not under advice of a physician for medical reasons.[6]

Health.—See Disease. If the insured states that he is in good or sound health, this means free from any substantial or chronic malady having a direct bearing on the general health, expectation of life, and hence on the risk.[7]

Intemperance, Death Caused by.—Where this risk is excepted it has been held to include death caused by the excessive use of liquor for a short period of time only.[8]

Intoxicating Liquor or Narcotics, Death from Use of.—Where this risk is excepted it has been held to intend voluntary use, not when prescribed by a physician.[9] And it must be the proximate cause of death. If it be such cause it need not be immoderate or intemperate use to fall within the exception of such a risk in a policy.[10]

45 How. Pr., 504, 36 N. Y. Super. Ct., 234, aff'd on opinion below, 56 N. Y., 640.

[1] Paul *v.* Travelers' Ins. Co., 112 N. Y., 472, 20 N. E. R., 347, 8 Am. St. R., 758, 3 L. R. A., 443; Bernays *v.* United States Mutual Acc. Ass'n, 45 Fed., 455.

[2] Root *v.* London Guarantee and Accident Co., 92 App. Div. (N. Y.), 578, 86 Supp., 1055.

[3] Thayer *v.* Standard Life and Acc. Ins. Co., 68 N. H., 577, 41 Atl. R. 182.

[4] Menneily *v.* Employers' Liability Assur. Corp., 148 N. Y., 596, 43 N. E. R., 54, 51 Am. St. R., 716, 31 L. R. A., 686.

[5] Aetna Life Ins. Co., *v.* Davey, 123 U. S., 739, 8 Sup. Ct., 331, 31 Lawyers' Ed., 315.

[6] Aetna Life Ins. Co. *v.* Ward, 140 U. S., 76, 11 Sup. Ct., 720, 35 Lawyers' Ed., 371.

[7] Manhattan Life Ins. Co. *v.* Carder, 82 Fed., 986, 27 C. C. A., 334; Brown *v.* Ins. Co., 65 Mich., 306, 32 N. W. R., 610; Grattan *v.* Metropolitan Life Ins. Co., 92 N. Y., 274, 44 Am. R., 372.

[8] Aetna Life Ins. Co. *v.* Davey, 123 U. S., 739, 8 Sup. Ct. R., 331, 31 Lawyers' Ed., 315.

[9] Endowment Rank K. of P. *v.* Allen, 104 Tenn., 623, 58 S. W. R., 241.

[10] Mutual Life Ins. Co. *v.* Stibbe,

Loss of a Member.—Where an accident benefit is provided for the loss of a member, the question has arisen whether only the complete and actual amputation of the member is meant. By the weight of authority, if the testimony shows that the insured has completely and permanently lost the use of a limb, as by paralysis, he has suffered the "loss" of it within the meaning of the policy.[1]

Medical Treatment.—Where a policy requires the insured to state whether he has received medical treatment within a given time, a physician's attention for some actual disease is intended, not for some trifling or imaginary disorder.[2]

Natural Causes, Death from.—Where liability was measured by natural causes of death, it was held that intentional or accidental killing was excluded thereby.[3]

Over-Exertion.—Where an accident policy excludes the risk of death or injury from over-exertion, the term has been defined to mean a voluntary and unnecessary over-exertion, not one put forth in an emergency of danger to save oneself from injury, as from being crushed by a great weight.[4] And what is over-exertion for one man may not be for another; thus, riding a bicycle race,[5] or lifting a 300-pound weight a short distance by a strong man accustomed to such exertion.[6]

Poison.—When liability under a policy is exempted for death or injury from *poisoning*, or *contact* with poisonous substances, both unintentional and intentional poisoning are included.[7] But when the exemption is from liability for death

46 Md., 302; Hanna *v.* Conn. Mut. Life Ins. Co., 8 Misc. (N. Y.), 431, 28 Supp., 661; *cf.* Miller *v.* Mut. Ben. Life Ins. Co., 31 Iowa, 216, 7 Am. R., 122; Union Cent. Life Ins. Co. *v.* Hughes. Adm., 110 Ky., 26 60 S. W. R., 850.

[1] Sheanon *v.* Pacific Mut. Life Ins. Co., 77 Wis., 618, 46 N. W. R., 799, 20 Am. St. R., 151, 9 L. R. A., 685, *s.c.* 83 Wis., 507, 53 N. W. R., 878; Sneck *v.* Travelers' Ins. Co., 88 Hun (N. Y.), 94, 34 Supp., 545; Supreme Court of Honor *v.* Turner, 99 Ill. App., 310, Sisson *v.* Supreme Court of Honor, 104 Mo. App., 54, 78 S. W. R., 297; *contra* (?), Stever *v.* People's Mut. Acc. Ins. Asso., 150 Pa., 132, 24 Atl. R., 662; 16 L. R. A., 446.

[2] Billings *v.* Met. Ins. Co., 70 Vt., 477; Edington *v.* Mutual Life Ins. Co., 67 N. Y., 185; Valentine *v.* Metropolitan Life Ins. Co., 106 App. Div. (N. Y.), 487; Hubbard *v.* Mutual Reserve Fund Life Ass'n, 100 Fed., 719, 40 C. C A., 665.

[3] Slevin *v.* Board of Police Pension Fund Commr's, 123 Cal., 130, 55 Pac. R., 785, 44 L. R. A., 114.

[4] Reynolds *v.* Equitable Acc. Ass'n, 59 Hun (N. Y.), 13.

[5] Keeffe *v.* Nat'l Acc. Soc., 4 App. Div. (N. Y.), 392, 38 Supp., 854.

[6] Rustin *v.* Standard Life and Acc. Ins. Co., 58 Neb., 792, 79 N. W. R., 412, 76 Am. St. R., 136, 46 L. R. A., 253.

[7] McGlother *v.* Provident Mut. Acc. Co. of Phila., 89 Fed., 685, 32 C. C. A., 318; Early *v.* Standard

caused by *taking* poison or *inhaling* poisonous gases it seems to be well established that only a voluntary taking is meant.[1] The question often arises as to what are poisons, and it usually involves expert medical or chemical testimony. For the general classification of poisons and also the essential differences between toxicological, *i.e.*, chemical, action of substances upon the body, and purely mechanical action, such as burning, suffocation, or drowning, see Vol. IV. of this work generally.[2] The following have been held not "poisons": Substances not ordinarily poisonous, *e.g.*, oysters;[3] putrid animal matter;[4] sting of insect.[5] But carbolic acid thrown in the face is "contact with a poisonous substance,"[6] and contact with poison-ivy has been held the same.[7] Whether inhaling coal-gas is poisoning was determined in an interesting case as a question of fact depending upon the weight to be given by the jury to conflicting expert testimony. As a matter of curious, rather than scientific interest, it may be noted that the jury found that the result was suffocation, not poisoning.[8]

Proximate Cause of Death.—Medical testimony is often requisite to enable the court to determine whether the injury of an insured was the proximate, or only the remote cause of death. The questions of law in cases where proximate cause is at issue have been so varied and have involved so many subtle distinctions that it is impracticable to examine them adequately in this article. Any standard work on accident insurance discusses a multitude of such cases. A charge of United States District Judge Dyer to the jury[9] states the law in a typical case succinctly and accurately. The policy in suit required that the accident

Life and Acc. Ins. Co., 113 Mich., 58, 71 N. W. R., 500, 67 Am. St. Rep., 445, and cases cited.

[1] Travelers' Ins. Co. *v.* Dunlap, 160 Ill., 642, 43 N. E. R., 765, 52 Am. St. R., 355; Menneily *v.* Employers' Liability Assur. Corp., 148 N. Y., 596, 43 N. E. R., 54, 51 Am. St. R., 716, 31 L. R. A., 686.

[2] *Cf.* on this point, Boswell *v.* State, 39 S. E. R., 897, 898, 114 Ga., 40; Dougherty *v.* People, 1 Colo., 514, 519; United States Mutual Acc. Ass'n *v.* Newman, 84 Va., 52, 3 S. E. R., 805.

[3] Maryland Casualty Co. *v.* Hudgins, 97 Tex., 124, 76 S. W. R., 745, 64 L. R. A., 349.

[4] Bacon *v.* United States Mut. Acc. Ass'n, 44 Hun (N. Y.), 599.

[5] Omberg *v.* United States Mut. Ass'n, 101 Ky., 303, 40 S. W. R., 909, 72 Am. St. R., 413.

[6] Mechan *v.* Traders' and Travelers' Acc. Co., 34 Misc. (N. Y.), 158, 68 Supp., 821.

[7] Preferred Acc. Ins. Co. *v.* Robinson, 33 So. R. (Fla.), 1005, 61 L. R. A., 145.

[8] United States Mut. Acc. Ass'n *v.* Newman, 84 Va., 52, 3 S. E. R., 805.

[9] Barry *v.* United States Mut. Acc. Ass'n, 23 Fed., 712.

should be the proximate and sole cause of death. Judge Dyer charged: "Interpreting and enforcing the policy according to its letter and spirit, it must be held that if any other cause than the alleged injury produced death, there can be no recovery. In short, to entitle the plaintiff to recover you must be satisfied that the alleged injury was the proximate cause of death. Whether a cause is proximate or remote does not depend alone upon the closeness in the order of time in which certain things occur. An efficient, adequate cause being found, must be deemed the true cause, unless some other cause, not incidental to it, but independent of it, is shown to have intervened between it and the result. If, for example, the deceased suffered injury to an internal organ, and that necessarily produced inflammation, and that produced a disordered condition of the injured part whereby other organs of the body could not perform their natural and usual functions, and in consequence the injured person died, the death could be properly attributed to the original injury. In other words, if these results follow the injury as its necessary consequence and would not have taken place had it not been for the injury, then I think the injury could be said to be the proximate or sole cause of death; but if an independent disease or disorder supervened upon the injury, . . . I mean a disease or derangement of parts not necessarily produced by the injury, or if the alleged injury merely brought into activity a then existing but dormant disorder or disease, and the death of the deceased resulted wholly or in part from such disease, then it could not be said that the injury was the sole or proximate cause of death."

Pulmonary Disease.—Where an insured warranted that he had had no pulmonary disease, it was held to mean no chronic disease, and the question did not require him to state that he had had pneumonia.[1] This seems a doubtful decision. *Cf.* Disease.

Serious Illness.—When an applicant for insurance is required to state whether he has had a serious illness, only those illnesses which commonly affect the risk, by permanently injuring the system and tending to shorten life, are meant. It is not necessary that they should have been dangerous illnesses.[2]

[1] Metropolitan Life Ins. Co. *v.* Bergen, 64 Ill. App., 685; Carson *v.* Metropolitan Life Ins. Co., 1 Pa. Super. Ct., 572.

[2] Peacock *v.* New York Life Ins. Co., 20 N. Y., 293; Boyle *v.* Northwestern Mutual Life Ins. Co., 95 Wis., 312, 70 N. W. R., 351; Illinois Masons' Benefit Soc. *v.* Winthrop, 85 Ill., 537; Continental Life Ins. Co.

Spitting Blood.—See Disease.

Suicide.—See the article in this volume on the Medico-Legal Relations of Insanity, Effect of Insanity on Insurance, Vol. III., page 373. When a person is found drowned, there is in general a presumption of fact that he did not commit suicide, based on the principle that every man tends to obey the instinct of self-preservation.[1]

Sunstroke.—See Accident.

Total Disability.—Incapacity for work or business is generally the test of total disability within the meaning of accident policies.[2] The phrase must be given a reasonable meaning, and if what the insured is able to do is only a small and unsubstantial part of his usual work, he is totally disabled.[3]

Vaccination, Successful.—Where made a condition of the policy being valid, successful vaccination was held not to require vaccination producing absolute immunity from smallpox, but merely producing the ordinary symptoms; it was sufficient if the vaccination "took."[4]

Visible Marks upon the Body.—See External and Visible Sign of Injury. When an accident policy requires as a condition of a recovery under it that there shall be a visible mark upon the body merely, it is sufficient if some internal sign is found, as a localized redness of the tissues of the brain shown by an autopsy.[5] And it has been held that the mark need not be visible to the eye; if a physician can perceive it by the sense of feeling the mark is sufficient to satisfy the requirement of the policy.[6]

v. Young, 113 Ind., 159, 15 N. E. R., 220, 3 Am. St. R., 630; Drakeford *v.* Supreme Conclave K. of D., 61 S. C., 338, 39 S. E. R., 523; Goucher *v.* Northwestern Traveling Men's Asso., 20 Fed., 596; Higbie *v.* Guardian Mut. Life Ins. Co., 53 N. Y., 603, 605.

[1] Mallory *v.* The Travelers' Ins. Co., 47 N. Y., 52.

[2] Mutual Benefit Asso. *v.* Nancarrow, 71 Pac. R., 423, 18 Colo. App., 274, Lobdell *v.* Laboring Men's Mut. Aid. Ass'n, 69 Minn., 14, 71 N. W. R., 696, 65 Am. St. R., 542, 38 L. R. A., 537; Beach *v.* Supreme Tent of K. of T. M. of the World, 177 N. Y., 100, 69 N. E. R., 281.

[3] Wolcott *v.* United Life and Acc. Ins. Asso., 55 Hun (N. Y.), 98, 8 Supp., 263; Commercial Travelers' Mut. Acc. Asso. *v.* Springsteen, 23 Ind. App., 657, 55 N. E. R., 973; Young *v.* Travelers' Ins. Co., 80 Me.. 244, 13 Atl. R., 896; Hohn *v.* Interstate Casualty Co. of N. Y., 115 Mich., 79, 72 N. W. R., 1105.

[4] Sovereign Camp Woodmen of the World *v.* Woodruff, 80 Miss., 546, 32 So. R., 4.

[5] Freeman *v.* Mercantile Acc. Ass'n, 156 Mass., 351, 30 N. E. R., 1013, 17 L. R. A., 753; Union Casualty and Surety Co. *v.* Mondy, 18 Colo. App., 395, 71 Pac. R., 677.

[6] Gale *v.* Mutual Aid and Acc. Ass'n, 66 Hun (N. Y.), 600, 21 Supp., 893

MEDICAL ASPECTS

OF

INSANITY

IN ITS

RELATIONS TO MEDICAL JURISPRUDENCE.

BY

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INSANITY IN ITS RELATIONS TO MEDICAL JURISPRUDENCE.

INTRODUCTION.

Difficulties of the Subject.

An introduction to a subject of this nature is at once difficult and yet important. It is but natural that difficulties should surround it, as the action of the mind in its normal condition is as yet but partly understood. The position of the public to this subject has, however, materially changed from that which it occupied even a quarter of a century ago. The idea of disease of the brain as associated with mental derangement has done much to remove the horror and mystery associated with mental disease. In the early centuries physicians had associated insanity with disease of the brain, and all through the literature of this period we find descriptions of cases of insanity; but in the Middle Ages superstition and ignorance again held sway, and the intelligent and more or less scientific opinions of the past were lost sight of. Under the direction of the priest the insane were regarded as possessed by spirits or under the displeasure of God. The consideration that morbid changes in the organ of the mind, the brain, as in other organs of the body, must necessarily interfere with its functional activity, provides a material basis for the consideration of the subject, which alike to the professional and lay mind has had the effect of removing the stigma from those who are so unfortunately affected. This conception also suggests the idea that, as in other diseases, we may have acute and chronic, curable and incurable forms, so in mental disease, like conditions may exist, opening up in this way a solution of many questions of the relation of the insane to their surroundings.

The study of psychology from a physiological standpoint has done much to bring about this improved condition. It is

not possible at present, and probably never will be, to establish a material basis for thought, nor in my opinion would much be gained thereby; but it is of great importance to have arrived at a definite conclusion as to the method of study of thought or mental action. Proceeding from this we can see that to understand insanity we must hold some conception of sanity. No definition can be made to apply to all civilizations. The normal mind expresses itself through the feelings, thought, and volition, in accordance with the accepted customs and rulings of its surroundings, and departure from this recognized order of action constitutes just so far a departure from the normal. *The legal aspect* of the question only arises where the welfare of the *individual or community* is affected. One can well understand that acts by savages, cruel and inhuman though they may be, cannot be ascribed to mental disease, though they would be classified as insane acts in a civilized nation. The great advance of modern times, then, is the consideration of insanity or mental derangement as *a disease of the brain.* The term "*partial insanity*" is a poor one and open to criticism, for, as has been truly said, the person must be either sane or insane; and yet as all the other organs of the body may be more or less completely disorganized and still functionate, although imperfectly, so the mind may be able to act although imperfectly. The principle here laid down is of great importance, and if applied would do away with much of the contradiction of expert testimony; for, after all, it is not the question *of insanity that is most often in dispute*, but the question of responsibility for the act committed, which must depend on the form and degree of mental impairment. The absurd travesty of justice and common sense is seen too often in our courts, by which persons are declared insane and irresponsible at the time of the act, although sane at the time of and following the trial. Such conditions lead juries, from fear of allowing the dangerous if not insane man his liberty, to discard the plea of insanity. The commission of certain acts, which are held to be those of an irresponsible person, usually also mark that person as one who should remain in the custody of the State. The fact that he has at one time been capable of irresponsible action of a serious character makes it possible, if not probable, that he will again be subject to a like impulse. We should *estimate his*

condition from his past history as well as from his present apparent state.

Cullen[1] discusses the subject of *partial responsibility* or *partial insanity* very fully. He says in substance as follows:

Considering the profound and complex modifications which the moral organism of the individual is subject to, it is very difficult for the physician to define the limits within which moral liberty remains intact. The doctrine, however, of partial or attenuate responsibility is admitted by a certain number of physicians and legal writers.

Casper, at a period still recent, "considered that any one, the subject of a delusion, should be held responsible, if the act was not committed under the influence of that delusion." This is the generally accepted ruling in civil and criminal procedure. Legrand du Saulle[2] admits total irresponsibility only in cases of general insanity. In cases of partial alienation (a term untenable from a medical point of view) the individual "should not be held responsible when he has acted under the influence of the delusion, but should be so considered, when the impulse under which he acted is foreign to the sphere of his maniacal conceptions."

These opinions, however, have as a foundation psychological considerations *not consistent with medical views* and contrary to clinical observation. For admitting them, it is necessary to deny the solidarity of the faculties which compose the human intelligence and to admit, for instance, that the individual possessed by a fixed idea is sufficiently master of his reason to resist all other impulses. To-day, however, there can scarcely be found a clinical expert, who does not admit that, "however limited the circle in which the delusion moves, the intelligence is altered in its totality, and that morbid ideas can germinate and develop only on a territory previously morbid; that insanity, if different in its manifestations, is a unit in its nature, and that monomaniacs present in the course of their existence several different monomanias, not constituting, however, different forms of insanity but different symptoms of one disease."

[1] "Maladies Mentales." 3d part: Legal Medicine and Legislation.

[2] "Traité de Médecine Légale," Paris, 1886.

"How can it be affirmed," says J. Falret,[1] "that a given act, accomplished at a certain moment, is totally foreign to the maniacal conceptions of the individual, while another act, committed at the same moment, must be ascribed to a morbid impulse?"

The whole question often hinges on the idea so common, with judge and jury, that insane persons must *at all times show evidence of insanity, so that, if they exhibit any natural desires and motives, or show any lucidity in their speech and actions, it is assumed at once that they are of sound mind and responsible for their acts.* This is especially seen where the person after the act uses methods to escape the result of his act, or has shown skill in planning its accomplishment. Another element, which, while of great importance indeed in deciding these questions, namely, that of a *motive for the deed*, is *given too great weight*, for motive is often present in the insane. A delusion, perhaps a concealed one, may be back of it, but except in the violently maniacal cases, where great mental confusion exists, there is frequently a motive, more or less well defined, present.

The tendency of modern times to give more weight to the testimony of physicians, trained in mental diseases and accustomed to observe the method of thought in the insane, is to be encouraged. The two aspects of view, *i.e.*, the medical and legal, are necessarily different, but at the same time cannot be absolutely divorced. It cannot be the province of the expert to render a decision as to the responsibility of the person in question, nor can he define insanity in a way which can always be of practical use for the courts, but he can and should state how far the mental condition depends on disease and to what extent the individual has been deprived of the free exercise and control of his will, either by reason of overpowering false ideas or by general impairment of his mental faculties.

The object of all law is the protection of the public. Punishment of the criminal is only a means to that end. In the principle, laid down by all civilized nations, for the protection of those who are considered mentally unsound, from the consequences of their acts, this idea is present. Any difficulty in this respect arises only where the question of fact as

[1] "Dict. Encyclop. des Sciences Médicales," 3e série, t. iii.

to the insanity of the accused exists, especially in the so-called borderland cases or when again the mental disorder manifests itself either intermittently or periodically.

Practically, however, another phase of the question arises, especially in *criminal cases*—that is, whether the mental disorder is of such a character as to deprive the individual of the knowledge of the moral character of his acts, as to whether they are right or wrong, and as to whether he knew they were contrary also to the law of the land. A person might understand the character of his acts, while from a medical standpoint he might be considered insane. The English and American law follows this method of procedure, while the German courts give greater weight to the medical testimony, and have special, so-called court physicians, who are called upon to state the mental condition of the accused. As a result there is more frequently partial responsibility for the act allowed than with us. The question of partial insanity can in this way be eluded. Casper, the great German authority, in the last edition by Liman takes this ground very positively.

While agreeing with most of the authorities, as Griesinger, Krafft-Ebing, Kirchhoff, and others, *that we must regard the mind as a whole, and not as consisting of independent faculties*, or functions, which can be individually and independently diseased, he holds for this very reason that disease especially affecting one of these divisions of the mind must involve the integrity of the whole. If these views can be accepted, it is reasonable to consider degrees of responsibility—without accepting the idea of partial insanity.

A delusion which does not affect the act committed or has no bearing on it, or again if true would not justify the act in a sane person, is not accepted by the courts as a defence. While this is right in so far as it should not preclude the accused from all responsibility for his act, the fact that the individual is so far mentally affected that he has delusions, should have its weight in respect to the kind of punishment to be meted out.

These remarks have especially to do with criminal cases. In civil cases, indeed, as in matter of contracts, wills, torts, etc., the presence of delusions having no bearing on the subject-matter are justly excluded from rendering the acts void.

In no way can the great difference between the medical and

legal estimate of the fact of insanity and its relations be better shown than in the degree of responsibility ascribed to those of unsound mind, in civil or criminal procedure.

An individual might be held responsible for his civil act, who, however, would not be held criminally responsible.

It is impossible, therefore, for the law ever to establish lasting or permanent principles. Each case must be studied by itself, and changes in opinions on social questions will always modify with time present rulings.

Mechanism of Thought, or the Science of Mind.

In order to properly consider the subject of mental disease, we must in a brief manner consider the subject of the mind itself. Mind is represented by mental action, which is only the psychical function of the brain, as distinguished from its physical function. Mental action can only be understood or appreciated by its expression in the feelings generally and their subdivisions, the various emotions; and by thought, which is represented by perceptions dependent in every case on the special sense impressions received into consciousness. Under the head of thought, therefore, must come ideation, which depends on the reception of perceptions, their retention or memory, and their comparison and association, or judgment. The knowledge whether or not thought exists in the individual depends on its expression, either in language or action, in other words in volition. The combination of the three general faculties of the mind constitutes the psychical function of the brain. Volition must, therefore, represent thought, as action must be purposive in normal mental function. It is under this consideration that we are able to recognize the great difference between sanity and insanity.

In considering the various faculties of the mind, their activity implies consciousness on the part of the individual—a special consciousness, in which the individual or Ego is cognizant of the impressions which are being perceived.

We have to do with, in fact, self-consciousness, which has been defined as the recognition of one's own personality. *Self-consciousness differs from consciousness in general; it is what makes the individual.*

In a child impressions are received, painful ones resulting in reflex expressions of painful feeling or emotion, and *vice versa*. Mere excitation of the special senses of sight or hearing are usually pleasurable. Repetition of these impressions creates permanent mental perceptions, which are recalled by similar impressions, by which means memory, so-called, is established. At first a new impression of a similar character is required to recall the former perception; later this may arise of itself. The comparison of these various perceptions results in an idea or conception; this implies memory, that is, the recalling of former perceptions, or, as it is called, apperception. It is now that a higher grade of feeling manifests itself in the form of desire; this is not at first present, all the responses of the cerebro-spinal system being reflex. Following close upon ideation and desire comes judgment or comparison of the various conceptions, and this is associated with volition. It is some time before the infant can dissociate himself from his environment, or in other words establish the Ego as distinct from his surroundings; self-consciousness is not acquired until that is accomplished.

In our brief study of the development of mind in the infant, the close and almost indissoluble relation or connection of the three faculties of mind is plainly seen. Another fact should be commented on, and that is, that the first evidence of mental function is in the field of the feelings. This seems the first to be evolved and in fact always accompanies the further development of the mental function. As it is the first to appear in the evolution of the mind, so, following a well-observed law of the nervous system, it is the first to be affected in its dissolution.

It is only with the evolution of the Ego into the consciousness, that desire can be said to be fully established and that the individual is able to discriminate what is for his own personal good or injury. Up to this point none of the higher qualities of man have shown themselves. The ethical side has not been developed; his relations have only been those which have concerned his own good or pleasure—the last stone to be laid on the edifice is regard for the good of others, under which head comes love of family, of country, and as the top stone love of mankind.

Feelings, as we have said, represent the emotions. In gen-

eral they are divided into pleasurable and painful. All mental action is accompanied by one or the other in some degree.

Subdivisions or forms of emotion are joy, sorrow, anger, fear, etc.

Perceptions are received through the special senses of sight, hearing, taste, and smell and general sensibility, under which we will include touch, pain, and temperature.

The intensity of these perceptions depends on the character of the irritation of the special sense and on the manner of reception into the sentient consciousness, that is, on the degree of attention. On these two conditions will depend the ability to correctly recall the perception. It is imperfect recollection in this regard which leads to phantasy. Where the *attention* has not been intense or active, or in cases where several impressions or presentations are taking place at the same time, or again where the impression in itself is not sharp and defined, erroneous perceptions may result; this is recognized in the form of hallucinations or illusions, or again in delusion.

A certain duration of time is also necessary for the complete recognition or reception of impressions; there must also be a certain degree of feeling accompanying it, else no attention is given. When impressions are rapidly received, there is usually a pleasurable condition resulting; when, however, one perception remains long in the consciousness, a sense of fatigue or pain results.

Intellection or thought implies the presence of perceptions, which by association of previous perceptions has led to a comparison of the various attributes of an object as received through the special senses. This recalling of former perceptions is memory, and any defect in it interferes with ideation or thought.

This can be studied from a psychological standpoint very well in the insane, where either a false perception, or the failure to recall all in regard to an object, results in a delusion or wrong conception.

In judgment we have the same mental process going on, only now conceptions or ideas are reached by memory and compared, their resemblances and differences noted. Here again, attention is of great importance, associated as it is also with feeling.

There cannot be thought or intellection without its expression in action or speech; in fact, speech is, probably, the agent or means by which thought takes place.

Speech was no doubt later evolved; nevertheless, by long hereditary influences, it has become a part of ratiocination. I do not mean by this that speech is necessarily articulate in the mental process. In our consideration so far we see the close relation of the various processes employed in mental action. It seems psychologically impossible to consider one as being affected, without involving the action of the others. Excessive pain or sorrow, pleasure or joy, can entirely prevent thought from taking place; again, the continued presence of certain ideas which cannot be removed can establish emotional conditions of pleasure or pain.

Just such conditions occur in the insane; the self-consciousness or the Ego being so changed or affected that the usual response to impressions no longer takes place, leading thus in a logical way to abnormal feeling, thought, and volition.

Medico-Legal Aspect.

Our conception of mental disease depends entirely on whether we look at it from a medical or legal standpoint. Ordroneaux, quoting Ray, says: "*Insanity in medicine* has to do with a prolonged departure of the individual from his natural mental state arising from bodily disease." "*Insanity in law* covers nothing more than the relation of the person and the particular act which is the subject of judicial investigation. The legal problem must resolve itself into the inquiry, whether there was mental capacity and moral freedom to do or abstain from doing the particular act."

Legally, the question of civil and criminal responsibility arises, making it necessary that we should consider not so much the form and character of the disease, as the mental soundness of the person affected, and also as to whether there can be any motive for simulation.

All countries agree in absolving from responsibility for criminal acts any one who is mentally unsound. According to the German law, a crime is not counted such when the doer at the time is unconscious, or is deprived of his free will by disease

of the mind. Austrian law defines an act as not criminal when the doer is unconscious or when his will is affected, or the character of the act not perceived. The French law is virtually the same.[1]

What is Insanity?

Synonyms.—Insania, Folie, Alienation mentale, Insania Folia, Irrsinn, Irresein, Wahnsinn, Verrücktheit. It is hardly possible to give a succinct *definition* of insanity. So long as the mental processes arise from natural causes and correspond to the condition of the surroundings, so long is the mind sound; when the feelings, ideas, and acts arise without cause, but rather from cerebral disease, we have the reverse. Mental disease is brain disease, but the reverse is not true. The organ of the mind has its basis in the cortex of the brain.[2] "Insanity is a matter of fact, and is not amenable to any legal test. It is for the jury or experts to determine the fact of insanity; for the courts to determine its effect on civil rights." *The general meaning of insanity at law* is "a permanently disordered state of the mind beyond the control of the individual, produced by disease. This must be proved, the burden of proof resting on the party alleging it. As mind is represented by feeling, thought, and volition, any departure from their normal relation must represent mental disorder. Persons may, however, be insane medically, but not in the eye of the law, and *vice versa.*"[3]

"It is a trite but a most important observation, that in the question of what constitutes insanity, the members of the two great and learned professions of law and medicine entertain essentially different and seemingly irreconcilable views, and that on the question of the irresponsibility of criminals, who are supposed to be insane, there is still a wide chasm of difference of opinion between them. To a certain extent this is true, and perhaps inevitable, and the reason of it is not difficult to find—that the two professions have to regard insanity and to deal with the insane with different aims and purposes. The physician has to prevent or cure it, and to him, therefore, the whole and especially the early history of the patient, embracing the causes and the development of the changes, bodily and men-

[1] Krafft-Ebing: "Gerichtliche Psycho-Pathologie," edition of 1875.
[2] *Ibid.*
[3] Ordronaux.

tal, and affording perhaps some insight into the pathology, is of preponderating importance. With him the main question is to prevent its interference with the enjoyment and duration of the life of the patient.

"*To the lawyer* it matters not how the seed of insanity was sown, nor the growth of the plant, except as confirmatory evidence that the plant is there. With him the sole question is, *its existence, its degree, and its influence on the conduct*, not therefore a medical but a moral one; and if the same mental states were capable of being produced by other conditions than disease, the same amount of irresponsibility would, I think, be recognized, as indeed is the case for children under seven years of age, in whom the law refuses to recognize the responsible knowledge of right and wrong." [1]

While indeed, as the writer just quoted states, the standpoint of law and medicine is different in the view of what insanity is, there are many points which they must investigate in common, especially heredity, injuries, etc., as causative agents, and again "the bodily and mental changes" are fully as important for the lawyer to study as for the physician. *In fact it is impossible for the law to do without the knowledge which belongs to the medical expert*, for the question of responsibility is determined by the fact, whether or not the disease of the brain is of such a character as to fall under the rulings of the courts, as to what constitutes insanity. This cannot be left to laymen to decide, and therefore, despite the somewhat contemptuous reference to medical experts by some judges, they are forced to make use of their knowledge.

"No doubt the extension of the meaning of insanity, as understood by medical men, has been due in a great measure to more laborious and accurate methods of observation, resulting in actual discovery and increase of knowledge, and also to a more enlightened estimate of the correlation of insanity with other nervous diseases; but also it seems to me it has gained an impulse from the adoption of hypotheses which have no direct relation with the actual existence of mental disease, and which, however useful and admissible in the theoretical conception and in the practical study of other causation of insanity, are completely out of place in the investigation of such practical

[1] Bucknill: "Insanity in its Legal Relations."

questions as whether a criminal is or is not insane. As a type of this kind of hypothesis I may cite what is called the insane neurosis, being, if I understand it aright, the condition of a man who is more liable than other men to become insane, but who has hitherto shown no signs of the presence of the disease itself. No doubt there is such a condition as an insane neurosis. And there is also such a condition as a criminal neurosis. It is the Hegelian theory of becoming, and we are all becoming, something which we are not. But the inquiries of criminal courts are restricted to actual events of the past; and if these forty-fold forms of insanity, this tendency, to comprehend all nervous disease within the pale of insanity, these speculative views as to the existence of inherited insanity which shows no signs, are in any way reflected in the evidence of medical witnesses, no wonder if our legal fellow-laborers, in the interest of truth and justice and the welfare of society, should take a stand which may be nothing more than the conservatism of common sense." [1]

One observes perhaps primarily, in all mental disease, a change in the feelings or the emotions, and therefore in the personality. There may be excitement or apathy, but in either case a concentration upon the *ego* or individual who becomes the central figure amid disordered perceptions and conceptions. As all mental action is carried on through perception, we expect and find disorders of the various perceptions, as represented in hallucinations and illusions. While these latter conditions are not necessary for our diagnosis of insanity, still in conjunction with other symptoms they are perhaps the strongest and most common evidence we have of mental disease. Delusions, either primary or secondary to hallucination and illusion, are the best proof we possess of mental aberration, but they are not absolutely necessary, and in many cases are not present in well-recognized forms of insanity. As a necessary part of the normal mental activity, consciousness must be present, and the recognition of one's own personality, by which we mean self-consciousness. We observe then, in the insane, first some change in this entity—self-consciousness.

J. Battey Tuke defined insanity as consisting "*in morbid conditions of the brain, the result of defective formation or*

[1] Bucknill: "Insanity in its Legal Relations."

altered nutrition of its substance, induced by local or general morbid processes, and characterized especially by non-development, obliteration, impairment, or perversion of one or more of its psychological functions." Bucknill[1] defines insanity as "a condition of the mind in which a false action of perception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts have separately or conjointly been produced by disease." The legal question must always involve the *extent of impairment of the will, and the consequent irresponsibility.* As Ray has well said, "certain it is that as we have become better acquainted with the anatomy of the brain, and have become more thorough and persevering in our examinations, the more rarely do we find a case of insanity presenting no organic changes after death."

Clinically, insanity is a disturbance of self-consciousness, and is dependent upon disease of the cerebro-spinal system. The object of the study of insanity is to discover the conditions under which psychical function or mental action departs from the normal, and to learn the method by which this function may be restored.

Brain affections with predominating disturbance of mental function are called diseases of the mind. The question necessarily arises, however, as to where the seat of the psychical or mental function lies. The cortex of the cerebrum is the organ of all mentality, the rest of the nervous system acting only as a conductor. Here are grouped the result of former feelings, perception, and volition. Mental action springs from, and depends upon, conscious perception in the cortex. There alone is the seat of thought. By comparative study of the hemispheres of the various grades of mammalians it is noted that the anterior brain, and the convolutions around the fissure of Sylvius, which pathology and physiology designate as the centre for speech, are especially developed in man. The significance of the anterior brain for the intellect is also shown by its proportionate increase in the more intelligent races, its loss in weight (Meynert) in mental disease. The convolutions become more complicated and increase as we ascend in the species. The significance of these fissures and convolutions lies in the fact of the increased

[1] "Unsoundness of Mind in Relation to Criminal Acts."

surface they present for the gray matter, which is proportional to the intelligence.

Mental action consists in perceptions and their action one on the other. In general, the three principal functions or faculties of the mind—the feelings, thoughts, and will—must act in harmony. We cannot separate them before the law. The fact of mental unsoundness is the important thing.[1] Mental disease must then affect these different factors of the mind, manifesting itself by anomalies of the feelings, and disturbances of the perceptions and conceptions.

"Any one or more of numerous causes may produce disease of the brain or nervous system, which interferes more or less with the feeling, will, or intellect of the person affected. Commonly the disease, if it runs its full course, affects the emotions first, and afterward the intellect and the will. It may affect the emotions, either by producing morbid depression, or by producing morbid excitement or feeling. In the first, which is much the commoner of the two cases, it is called melancholia, and in the second mania. Melancholia often passes into mania. Both melancholia and mania commonly cause false opinions as to existing facts, which suggest themselves to the mind of the sufferer as explanations of its morbid feelings. These delusions are often accompanied by hallucinations which are deceptions of the senses. Melancholia, mania, and the delusions arising from them often supply powerful motives to do destructive and mischievous acts, and cases occur in which an earnest and passionate desire to do such acts is the first and perhaps the only marked symptom of mental disease. It is probable that in such cases some morbid state of the brain produces a vague craving for a relief by some form of passionate action, the special form of which is determined by accidental circumstances, so that such impulses may differ in their nature and mode of operation from the motives which operate on the sane and insane persons alike. The difference may be compared to the difference between hunger prompting a man to eat, and the impulse which, when he suffers violent pain, prompts him to relieve himself by screaming. Insanity affecting the emotions in the forms of melancholia and mania is often succeeded by insanity affecting the intellect and

[1] Neuman's "Lehrbuch der Psychiatrie."

the will. In this stage of the disease, the characteristic symptom is the existence of permanent incurable delusions, commonly called monomania. The existence of any such delusion indicates disorganization of all the mental powers, not only the power of thinking correctly, but the power of keeping before the mind and applying to particular cases the general principles of conduct. The last stage of insanity is one of utter feebleness, in which all the intellectual powers are so much prostrated as to reduce the sufferer to a state of imbecility. Lastly, paralysis and epilepsy are so closely allied with insanity, that insanity frequently forms a symptom of each. In all the cases above referred to, the sufferer is supposed to have been originally sane, but sanity may never be enjoyed at all. This happens in cases of idiocy." [1]

English law recognizes two states of mental disease: (1) *Dementia naturalis;* and (2) *dementia adventitia*, under which general insanity is included. To this the term "*lunacy*" is usually applied. In New York, Massachusetts, and several other of the States statutes have been passed defining the term "*insane person*," "lunatic," "non compos," and "insane," so as to embrace all forms of insanity except idiocy. In many of the States, the law has made the words "*lunatic*," "*insane*," and "*non compos mentis*" synonymous and convertible terms.[2] There is no distinction between the terms insanity and unsoundness of mind.

ANALOGOUS CONDITION IN HEALTH.

Mental disturbance as represented by hallucinations, illusions, and delusions is not confined to the insane, but analogous conditions are not infrequently seen in health and in various diseases, or in persons under the influence of drugs, such as alcohol, morphine, hasheesh, etc. A most typical example of this is seen in delirium tremens, which may be taken as a fair representation of mania. In it we find great excitement, hallucinations, especially of sight and hearing, marked volubility, and the accompanying mental confusion which is usually present to a greater or less degree in all mania. The distinction,

[1] Stephen's "History of Criminal Law of England," vol. ii.

[2] Taylor's "Medical Jurisprudence."

however, is easily made between this condition and mental disease, in that we are acquainted with its cause and also with the fact that clinically we can define its course and duration. But even in these cases, the truth of its close alliance with mental aberration is proven by the fact that in chronic alcoholism we have a well-defined chronic, and generally incurable, form of insanity.

With *morphine*, we find hallucinations and delusions, usually of a pleasant character, which, however, the subject is able, when aroused to full consciousness, to recognize as merely such, giving therefore one of the cardinal distinctions between the so-called hallucinations of the insane and of the sane. The brief duration of these conditions also, of whatever nature, is opposed to the idea of their dependence upon disease of the brain structure.

We find in the dreams accompanying sleep an almost typical reproduction of the mental condition of the insane, as in both instances self-consciousness is never fully in the ascendency. In both cases, not infrequently, a dual existence may be partially recognized; or, again, the two existences, accompanied frequently by a change of personality, remain distinct and apart, so that in the insane, at least, acts committed or persons met during one state are not recollected in the other.

Krafft-Ebing puts this very clearly:

The *physiological function of the brain, on its mental side, is the production of feelings, thought, and volition.*

The spontaneous origin of mental action without adequate cause is, in general, a sign of internal irritative processes, its pathological nature manifesting itself by its duration, intensity, and general disproportion. Only when we know the source and motive of the mental action, can we decide whether it is that of a sane or insane person. In the majority of cases, in the early stages of insanity, the most marked symptom is emotional, not intellectual, and apparently has arisen without cause. It is similar, however, to the normal physiological reaction; the course of the feelings can be tumultuous or depressive, corresponding to melancholia or mania. If we compare physiological or normal depression with melancholia we notice no substantial difference; in both individuals there is evidence of psychical pain, both are depressed, and given over

to their painful impressions, interesting themselves in nothing else, *i.e.*, their usual duties or pleasures. Physically they exhibit similar states: they are sleepless, the appetite is poor, the intestinal action is sluggish, and there is general malnutrition.

The difference is, that in the first the mental pain and depression have an adequate cause in some previous occurrence, and are the physiological reaction from it, while in the other there has been no external cause, or at least not a sufficient one, but it has arisen from an internal process, the result of a diseased brain. The self-consciousness is too much affected to distinguish the true from the false.

The laity rarely make this distinction, especially when some cause exists, and try vainly to arouse the patient by change and occupation. The analogy is the same for mania: it is only a permanent state of the joy following, for instance, a good piece of news; observe also the slight line between genius and insanity.

ETIOLOGY.

The causes of insanity are predisposing and exciting.

Predisposing.—The predisposing causes are those which come under a general head, as civilization and race; the latter, however, except where races have isolated themselves from others, has very little influence. Among the Chinese there is very little mental disease. This may be due to their methodical habits of living and temperate use of alcohol. Age, with its transitional periods—*e.g.*, childhood, puberty, senility—subject the individual to special danger. It is difficult to say whether celibacy has an influence in this disease, although the proportion of those admitted into asylums, as given in the report of the Lunacy Commission in England, shows a much larger number among the unmarried. Occupation, where mental worry or monotony is present, as in sailors, teachers, prisoners, etc., has a deleterious influence.

Inhabitants of cities are more liable to mental disease. This is probably the result of the increased demands on the energy of the individual to maintain his social position or in the greater struggle for mere existence; there is also greater dissipation of all kinds.

There is one form of insanity which is peculiar to modern

life—*that which Kirn has termed the characteristic psychosis of the nineteenth century, namely, general paresis.*

This disease does not seem peculiar to any race, but depends on the surroundings of the individual and the vicissitudes and anxieties of life.

Before slavery in the United States was abolished, the negro was never affected with this form of insanity; it is now common among those who have flocked to the cities and who have been compelled to assume the responsibilities of supporting themselves.

This can also be said of the Irish, that is, after leaving their agricultural pursuits, and being exposed to the vicissitudes and excitement of large cities.

The Chinese in this country also supply their quota, several cases having come under my observation. We observe no change in the class of symptoms from mere difference of race: there are the same delusions of grandeur, the feeling of power, and the ideas of great wealth, associated with the physical signs of tremor and disturbance of articulation.

Heredity.

A most important element among the individual predisposing causes is heredity. It is more often the inheritance of an unstable nervous organization than any special form of insanity. The effect of predisposition to insanity is seen in its relations to all the direct and exciting causes.

Injuries, *fevers*, *grief*, *stress* of any severe form, with the hereditary tendency to mental disease in the individual, result in insanity, where in other persons the tendency would be slight.

This predisposition by inheritance may be due to various nervous disorders in the progenitors, as epilepsy, dipsomania, neuralgia, hysteria, etc., all producing alike an unstable nervous organization. The reverse of this is also true, nervous disorders being the result in the descendants of insanity in the antecedents.

Marriage between persons either too similar in mental characteristics or tastes, or again too dissimilar, not unfrequently results in insanity, especially if there is any consanguinity.

The tendency to inheritance of insanity depends largely on

the condition of the parent at the time of procreation. If the insanity developed after the birth of the child the influence of heredity is not so great. In regard to the special form of disease inherited, it may be of the same kind. Especially is this seen in suicidal tendencies, occurring not infrequently at the same age, or again the occurrence of insanity at the puerperal and climacteric periods when it has been directly inherited.

Certain forms, as general paralysis, are rarely directly inherited, although the children may be idiotic or subject to the various neuroses (Savage).

Individual Predisposing Causes:—Occupation.

Prisoners.—Among those confined in institutions, mental disease is not uncommon. Here it is also that the different forms of insanity are often feigned in order to avoid work or to procure hospital treatment. In the older method of treating criminals, where punishment by separation from others was common, mental disease was very frequent. The monotony of work without mental exercise may result in delusions common to various forms of mental disease, especially those of persecution. Epilepsy may also result. Mania is not common, but impulses, homicidal and suicidal, are frequent. Masturbation with its accompanying result, dementia, is frequent; but where a system of occupation is carried out, all these conditions are much lessened. Perhaps the mental disturbance most often feigned among prisoners is that of dementia. It is also the easiest and the least liable to detection. Still epilepsy is not infrequently assumed, as in the case of the so-called "dummy chucker" in Sing Sing prison. This patient had deceived many expert examiners, and was only detected after many years. The opposite condition of attempt at concealment of insanity is more rarely present. It is observed sometimes on examining the patient, especially in the degenerative type of disease. Where the symptoms can be restrained, it implies a certain amount of control; however, under provocation, or when the patient is taken unawares, the true condition can usually be determined. It is only by frequent examinations, or allusions to the special delusion of such cases, that the true mental condition can be discovered. In melancholia we find

this tendency to concealment of the condition, where it is of a mild type. After partial recovery from acute attacks, care is necessary to discover whether the delusions and hallucinations are still present. Our only method of estimating the sanity or insanity must ultimately rest on the conduct, whether expressed in speech or act.

There is little difference noted in the various business occupations. Those, however, whose life is more solitary or confined, as sailors, soldiers, governesses, teachers, etc., show greater tendency to mental disease. Professional beggars and prostitutes are especially liable; this is probably the result of sexual excess, drunkenness, and general privation.

Kirn finds that *prisoners*, probably through the physical weakness induced by imprisonment, and the influence of remorse, especially when solitary confinement has been carried out, are liable to *melancholia* with delusions of persecution and hallucinations of the special senses.

It has not been found that those engaged in the care of the insane are much affected. Certainly imitation is rare of the same form of disease. The social conditions do not seem to have any especial influence, except in so far as poverty and bad hygienical surroundings have in a general way a deleterious effect.

Religion.

According to Kirn religious formalism favors the occurrence of (primary) religious paranoia; this may even become epidemic under favorable circumstances. Investigation generally proves, however, that its effects are shown mainly in those predisposed to mental disorder by heredity or a neurotic disposition, or again at special periods of life, as puberty, the puerperal period, and during the climacteric. In regard to this latter class, also, it may be observed that the condition is not usually a permanent one, recovery taking place, while in true paranoia, which is itself a chronic delusional state, the religious excitement has acted simply as an exciting cause, and has given direction to the form of mental disturbance. Anxiety in regard to success in any special department, as in art or politics, especially when failure results, or even, though more rarely, great success, may

give rise to paranoia, though of a different type, as, for instance, with delusions of persecution.

During revivals mental disorder is common. The term "religious insanity" is misleading, and is to be deprecated. Where the delusions are of a religious character it is not infrequent to find associated with them an element of eroticism, so that those addicted to sexual abuse are frequently subject to such delusions. Communications with God are frequent, either through hallucinations of sight or hearing, leading to delusions in which special commands are received or in which a change of personality occurs. The character of God himself, or of some prophet is assumed. We find these conditions not infrequently among the uneducated, or among those of a low type of mental development. We often find among this class those who subject themselves to self-mutilation in their desire perhaps to atone for some crime, imaginary or otherwise. It is really a type of paranoia. *Epileptics are especially inclined to religiosity*, taking great pleasure in all exercises of a religious character. This, however, has little or no effect on their action, nor is true remorse likely to follow acts of the most extreme violence. Depression or self-condemnation is felt most often for imaginary acts of disobedience to God, especially in relation to self-abuse rather than to actual present wrong-doing.

Exciting Causes.

In those predisposed by heredity or a neurotic disposition, physical causes, as injuries, fevers, physiological states as pregnancy, lactation, etc., may induce mental disorder, but these causes may be the primary ones themselves.

The *various inflammation of the meninges, and the cortex of the brain*, rarely result in insanity. We may indeed have delirium and mania, but these symptoms are usually of comparatively short duration, and with the subsidence of the provoking cause they also subside.

We exclude from these remarks the specific characteristic affection of the brain peculiar to certain diseases, as general paralysis, as they are the pathological changes observed in the disease and not the cause.

Cerebral hemorrhage, tumors, multiple sclerosis impair the functional activity of the brain and tend to dementia rather than any well-defined psychosis. Here again we must not include in the list of causes what is a symptom of the disease, as apoplectic seizures in general paralysis.

Injuries to the skull may not manifest themselves in a deleterious way for years, but no doubt have an influence even after a long period, either directly or indirectly, in causing insanity. While we cannot consider it a predisposing cause to general paralysis it may be an exciting one.

Insanity may result from various diseases of the nervous system, as Basedow's disease, or exophthalmic goitre, hysteria, epilepsy, chorea, etc., tabes, multiple sclerosis. With the exception of tabes no special form is the result; here perhaps general paralysis not infrequently results. There are many allied and similar symptoms in these two diseases.

Following Griesinger we find that constitutional disease may result in insanity. General anæmic states following exhaustive disease, repeated loss of blood, special conditions as lactation, exposure as in the states of inanition following in shipwrecks, produce those forms of insanity which come under the head of functional psychoses, *i.e.*, mania, melancholia, hallucinatory and delusional insanity, and primary dementia.

Tuberculosis is very common among the insane, the mortality from this disease being large. I can scarcely agree that it is very frequently a direct cause of it, or that we are justified in establishing a special form under the name of phthisical insanity. Tuberculosis of the brain substance, or tubercular meningitis rarely terminates in insanity; the course of these diseases is usually a rapid and fatal one, and while such cases not infrequently are brought to the asylum, they cannot properly be considered as examples of insanity. The delusions and hallucinations may be excessive and the patient require restraint, the course of the disease resembling acute mania or delirium *gravé*. In such a patient under my observation, careful examination showed no physical signs of tuberculosis, either abdominal or cerebral. The temperature had suggested tuberculosis, and special attention had been given to these symptoms. Death ensued from exhaustion, and the post-mortem revealed a general miliary tuberculosis, involving the abdominal

region and the convex surface of the brain, the base not being affected.

The direct cause of the delirium and hallucination was the cerebral irritation by the miliary tubercles.

There was nothing characteristic to differentiate it from similar states occurring in acute mania, or in meningitis occurring in the course of acute inflammatory rheumatism.

Tuberculosis may run its course in the insane without being observed, the mental symptoms obscuring it, especially as the patients themselves frequently offer no complaint. The course of the disease is apt to be rapid, owing to the generally impaired nutrition.

My experience would not indicate that melancholia is more frequent than mania. Suicidal mania is not uncommon.

Syphilis stands in an important relation to insanity, associated as it is with disease of the meninges and the blood-vessels, as well as the brain substance itself. We frequently find acute conditions present.

Cerebral syphilis not infrequently passes into general paralysis of the insane. This implies organic changes in the meninges and cortex, secondary usually to the endarteritis, which are incurable. The estimate of the proportion of these latter cases due to syphilis varies with the author, some writers going so far as to say that it is the basis of general paresis in all cases with few exceptions. The initial stages in both may be very similar; in general paralysis, however, the fatal course of the disease is not affected by specific treatment, while cerebral syphilis not infrequently entirely clears up under the iodides and mercury.

Fevers, especially the infectious, may during their course cause insanity; this can be ascribed often to the high temperature or to the overwhelming of the brain by the direct poison. These states are rarely protracted, although at times they pass into chronic incurable forms. It is usual to find an hereditary history if that is the result, the constitutional condition acting only as the exciting cause.

Another cause for these mental states is the exhaustion and cerebral anæmia, which may result in hallucinatory mania or melancholia. This occurs in the course of all the fevers, as typhus, typhoid, small-pox, pneumonia, scarlet fever, etc.

Griesinger speaks especially of psychoses occurring in the course of *intermittent fever*, in regions where intermittent fever is endemic, the regular quartan or tertian attacks of fever being superseded by attacks of insanity (violent mania, suicidal impulse) without fever. This may terminate in chronic disease.

Influenza is not an infrequent cause of the functional type of the psychoses. The recent epidemic of the past few years has given occasion to many observations. While apparently melancholia is more common, mania of a violent character may follow. It would seem to be largely due to the exhaustion.

Rheumatism, when acute, causes meningeal irritation, the symptoms being usually acute and marked by delirium and hallucination. Clouston, Savage, and others speak of rheumatic insanity, but this is hardly a proper term. However, the close connection between the mental disturbances and the rheumatic attack can be noted by the fact that not infrequently a total disappearance of articular inflammation may be marked by the appearance of the mental symptoms, and *vice versa*.

Gout may be mentioned in the same relation and as following the same course.

The cause in both instances seems to be an overwhelming of the system with a distinct poison, and not to be due to the temperature changes. It can be compared to cases of metallic poisoning, as especially observed in lead and mercury, or again with uræmic conditions. The system can absorb slowly a large amount of these poisons, but if for any cause they are thrown suddenly into the system cerebral symptoms manifest themselves.

Alcohol, *morphine*, *cocaine*, *quinine* in excessive amounts show a similar class of mental symptoms, characterized by excitement or depression with various illusions and hallucinations of the special senses.

These acute conditions are to be distinguished from the chronic forms of mental disease, dependent principally upon arterial degeneration with its consequent malnutrition.

Too much weight is often placed on *malaria* in the production of mental disorder. Where mental disturbance has followed, it occurs in those previously disposed by a neurotic temperament or other hereditary forms of disease. Its occurrence

in the insane cannot be said to have any marked effect, except in a general way, upon the course of the disease.

ANÆSTHETICS AND MENTAL DISEASE.

Many cases of mental disturbance have been recorded as following the administration of anæsthetics, whether chloroform, ether, or nitrous oxide. This has often been observed in very slight operations, such as the extraction of the teeth while under the influence of nitrous oxide. It may take the form of maniacal excitement, or of marked stupor, or of acute dementia. It is, however, not as a rule of long duration. Dr. T. G. Thomas reports several cases following operations in which acute dementia followed, and several have come under the author's own observation. The most usual form in his experience has been of that type, or of a condition of stuporous insanity; rarely has it been of a maniacal character. It is probable that the nervous condition of anticipation is the effective cause of this mental disturbance rather than the use of the anæsthetic. It seems hardly possible that it alone would be effective, except in those who by their habits, as by the excessive use of alcohol, etc., are specially predisposed.

Genito-Urinary Irritation and Insanity.

Irritation of the sexual apparatus, whether due to disease or the practice of masturbation, not infrequently causes nervous and mental disorders; but these are more often of a functional than an organic type. They occur especially in those predisposed to nervous disorder by hereditary or acquired instability of organization. It is rare in my experience to find insanity *per se* due to masturbation, whether in the male or in the female. In all forms of insanity, especially in the later stages, as in dementia, where the higher powers of the mind have been affected, this practice is very frequent, but a true masturbational insanity probably does not exist. The effect of operations on the diseased organs is, as a rule, unsuccessful in producing recovery from mental disease if the hereditary predisposition is of the degenerative type. In other cases, it may

be favorable. In any case where disease is present, an operation for the removal of the abnormal condition is indicated.

Insolation and Insanity.

The influence of the sun, except in so far as it may cause inflammatory disease affecting the meninges, is not an important factor in insanity, but in connection with exhaustion, anxiety, and alcoholism it is of importance as a causative agent.

The heat of summer does not apparently influence the occurrence of mental disease, according to Krafft-Ebing, although Esquirol considered that more insane were received into asylums during the months of May and June. Arndt, Schüle, and Kraepelin think that great heat favors the outbreak of mental disease, especially mania. It is difficult, however, as has been remarked, to state when the disease commenced. The old idea that suicide due to insanity occurs in the gloomy month of November seems disproved and to be without foundation.

Change of climate seems to have some influence. Among those coming to a new country, especially among female domestics, I have observed a general impairment of nutrition, with amenorrhœa, associated with mental disease usually in the form of melancholia, either simple or with stupor.

Moral causes may act directly as the exciting agent. Especially is this seen following loss of relations, or business reverses, or any intense emotional disturbance, as disappointment in love, or the strain of great poverty, where the necessaries of life even are impossible of procurement. The mother in her despair may even be led to destroy herself and offspring to relieve them from suffering. Fear or terror following a criminal assault, or the shock from exposure to some great danger, as a railroad accident or fire, or the fear arising from epidemic disease—indeed, excessive anger itself—may cause insanity; but as has been said in reference to all these exciting causes, they fall most heavily on those already predisposed to mental disease.

Cretinism.

This is commonly a congenital condition, or commences early in life. The congenital type manifests itself by the stunted

appearance of the child, the thickness of the skin, and an appearance not unlike that of myxœdema. The intelligence is usually low, and the subsequent development is slow and imperfect. Speech is often, but not always, defective. The special senses are not infrequently affected, especially the senses of smell and hearing.

Table showing causes of insanity in patients admitted into the asylums and registered in hospitals in England and Wales during the ten years from 1878 to 1887:[1]

Moral.	Pregnancy.
Domestic trouble (loss of relatives).	Parturition and the puerpural state.
Adverse circumstances (business losses, etc.).	Lactation.
Mental anxiety and worry.	Uterine and ovarian disease.
Love affairs (including seduction).	Puberty.
Physical.	Changes of life.
Intemperance in drink.	Fevers.
Intemperance (sexual).	Privations and starvation.
Venereal disease.	Old age.
Self-abuse.	Other bodily diseases or disorders.
Over-exertion.	Previous attacks.
Sunstroke.	Hereditary influence ascertained.
Accident or injury.	Congenital defect ascertained.
	Other ascertained causes.
	Unknown.

GENERAL INDICATIONS OF INSANITY.

"The diagnosis of insanity presents itself to the physician in a purely medical or in a medico-legal point of view. In both cases, the grounds of the diagnosis must be the same. For although, in criminal trials, the nature of the crime itself and the manner in which it has been effected must often be allowed to have no inconsiderable weight in the formation of the judgment, yet these circumstances are essentially no other than a part of the conduct of the patient; and the conduct must be carefully estimated even when the question is not purely medical."[2]

"The *conduct* of the alleged lunatic himself *at*, *before*, *and immediately after*, the critical transaction, is relevant evidence of lunacy."[3]

[1] Tuke: "Dictionary of Psychological Medicine."

[2] Bucknill and Tuke: "Psychological Medicine."

[3] Beavan *v.* McDonnell, 10 Ex., 184; Lovatt *v.* Tribe, 3 F. and F., 9.

Mere eccentricity of dress and behavior, though admissible as evidence, goes but a little way to establish lunacy.[1]

The clinical phenomena and pathological changes do not stand in such close relation as in other diseases of the body. As Krafft-Ebing has well said: "We have not auscultation and percussion to help us in making our diagnosis; we have only psychological phenomena to deal with." From the disturbances of the *ego*, of the consciousness, of the memory (quantitatively and qualitatively), of the feelings, conceptions, and volition we must determine the nature of the cerebral disease. This special character is, however, only an apparent one; for if insanity is a disease of the brain, its symptoms must follow the laws of physiology and pathology which obtain in the nervous system. We must have the latency and the intermissions of disease; the exacerbations, the remissions, periodicity, and relapses; the response to irritation; the loss of response, the reflex action, etc., as in all nervous diseases. We can best understand this when we deal with it in the language used in disease. So we can speak in a certain sense of psychical or mental hyperæsthesia and anæsthesia; psychical convulsions or paralysis; increased or decreased reflex action or resistance to action. We must always remember that insanity is a disease, and that disease is life under abnormal conditions. Disease and health are not necessarily opposite; analogies and a neutral ground exist for both. The elements out of which diseased mental action results are the same for healthy mental action; the only differences are the conditions of their origin. The conditions for the process of psychical function in normal mental life are external irritation, that is, of the senses—sight and hearing—as well as an adequate cerebral reaction to this irritation. Along with this we have an understanding of the relation or agreement between the consciousness and the external irritation. In insanity the brain is under abnormal conditions. It is the seat of disease in which internal irritations will cause mental action. The mind acts spontaneously, uninfluenced by occurrences in the external world. So the patient stands in his inner world in opposition to the outer world, but this inner irritation produces the same result as if due to external irritation. This

[1] Boughton *v.* Knight, 1872, L. R. 3 P. & D., 84; D. Hack Tuke: "Dictionary of Psychological Medicine."

spontaneous internal action is the result of disturbed nutrition of the cortex of the brain.

We have two important disturbances resulting, viz.: (1) a changed reaction to external irritation, either increased or decreased, or qualitatively changed; (2) a change in the *ego*, that is, in the self-consciousness, and therefore a danger of taking the subjective internal irritations for objective external ones. The disturbance of the *ego* is the basis for the understanding of insanity. It consists especially in the failure to recall former experiences, and is important, therefore, as explaining the origin of delusions; or again, in taking for, or confounding, former perceptions with the present objective perceptions through mistaken interpretation of impressions in the disturbed consciousness. As all mental action is expressed through the feelings, thoughts, and actions, we must especially direct our attention to these three divisions. Under the head of feelings we shall therefore, as already said, observe changes in the individual, as indicated by depression or exaltation. As all thought or conception depends upon the perceptions, and as the latter are only received through the special senses, we must look for errors of perception of the special senses, such as hearing, smell, etc. We therefore find hallucinations and delusions among the common symptoms of mental disease.

Hallucinations.

Hallucinations may be defined as erroneous perceptions, not dependent on present external impressions, but evolved from the diseased brain itself, and dependent upon previous perceptions; or, as Taylor has defined them: "Those sensations which are supposed by the patient to be produced by external impressions, although no material object acts upon his senses at the time."

While, in general, we may accept this statement that *hallucinations* are not due to excitation of the special sense involved, still they may depend on some disease of that sense organ which without external irritation is thus capable of exciting an impulse to the receptive centre in the brain. It is more probable, however, that the actual cause is the morbid cerebral state, as otherwise the irritation would be correctly interpreted. An-

other evidence of this lies in the fact, that where the special sense is congenitally absent, no hallucinations referred to that special sense take place. Those born blind do not have hallucinations of sight, *but again, on the other hand, those who become blind may have them, showing that the hallucination depends on previous sight-perceptions.*

Hallucinations are very common in the insane, Esquirol putting the percentage as high as eighty per cent, which is probably too high. In many cases they are recognized as such, but oftener are accepted as real and lead to acts as a logical sequence. The character of the hallucination will depend largely on the occupation or the object which immediately interests the person. Sights may constantly recur, which were but imperfectly observed as at the time of a surgical operation, while the patient was passing under the influence of ether. A patient related to me that, following an operation, he felt as if he were before an abyss, and that the surgeon was about to throw him into it. An interesting feature in this case was the occurrence of a double hallucination, in which he heard voices saying that he was damned.

While realizing that these voices were not real, if spoken to about them, he could not prevent himself from firing his pistol in the court from which they apparently came.

Hallucinations may affect any or all the special senses, as sight, hearing, taste, smell, as well as the general sensibilities or sensations. Hallucinations of sight and hearing are the most common, and the latter more so than the former; the importance of those of hearing is greater, as here we more often have imperative orders from God, or some other influence directing the performance of some act. Without warning an act may be suddenly committed. These forms are most common in melancholia and mania, and while their presence cannot be absolutely accepted as evidence of insanity, they are strong proofs in its favor. *Hallucinations of smell and taste* are much more rare; however, some of the disgusting acts of the insane, as the eating of human excrement, or the covering themselves with it, may be due to them.

I have observed in the blind that hallucinations of smell are not uncommon. Among the class of so-called degenerates this form is frequent, and may be of a sexual character. Religious

hallucinations are of frequent occurrence, in which God or the Virgin Mary or the devil may appear or may address them.

An illusion, according to Griesinger, is a "false interpretation of an external object." The distinction between it and a hallucination, therefore, lies in the fact that the object in the one case is not present, while in the other it is. *In illusions and hallucinations the perceptions in both cases are false.*

There is always some confusion in law in understanding these terms, often no distinction being made.

The remarks in regard to hallucinations involving the special senses and general sensibility apply equally to illusions. Perhaps, in regard to general sensibility, they are more frequent. Visceral disturbances or cutaneous states, being misinterpreted, lead oftener to illusions than hallucinations.

Delusions are erroneous or false conceptions which may result from hallucinations and illusions or be the result of false reasoning. A delusion may be defined as an absurd and unfounded belief (Foster).

Delusion has reference to the reason, differing in this respect from illusion and hallucination, which have to do with the senses. It involves, therefore, more seriously the mental processes, and is a surer indication of insanity.

It is not, however, always present in the insane, as Griesinger well says: "In many cases no special delusion is present, or at least none is exhibited, but the sentiments, dispositions, and conduct are altered in a morbid manner, and owing to a morbid state of the brain the individual is influenced, so that the healthy faculty of judgment is obscured, the intelligence formally involved, and the spirit held in bond."

Delusions vary in character, especially as they so often depend on false perceptions of the special senses. Their character depends largely also on the form of the mental disorder in which they appear.

Those occurring in the various forms of mania are generally of an expansive character, in which the *ego* has become so altered that changes in the personality occur. The person imagines himself some exalted personage, either a great general, or artist, or even God himself. Especially in this form do delusions of an erotic or religious character occur. The sexual element is frequently prominent in religious delusions. This may be ob-

served in those cases of religious delusion where young women having hallucinations of sight or hearing have had the delusion of being pregnant through the influence of the Holy Spirit.

Delusions may be systematized; by which we mean, there is usually some basis for their origin. It may indeed be an absurd one or have actually some ground for belief. In any case the patient has established a chain of logical reasoning, satisfactory to himself in explanation. Another element in this form of delusion is its permanence. They are as a rule few in number; indeed, there may be but one. They may exist for years, the intellectual faculty being but little impaired with the course of time.

Conjoined with this form of delusion is that of *persecution.* The process of reasoning in these cases is simple and logical. The *ego* or self-consciousness being unable to understand the various false perceptions received into consciousness, the individual arrives at the conclusion that, as he feels a definite change in his personality, he must be some personage of importance, but realizing that he is not so considered by others, he readily assumes the idea that some one is preventing him from assuming his proper position, and that, therefore, he is being persecuted.

It is a short step from this to delusion of suspicion, of being followed, etc.

Unsystematized delusions, to use a term which has fastened itself upon our nomenclature, are usually multiple, varying with the circumstances of the individual and the causes. There is not, as a rule, any attempt to explain them on the part of the patient; they simply arise, and, according to their character, cause elation or depression.

Especially in this form do we observe *sudden impulses arise, imperative conceptions* (Hamilton). The logical element is absent. They may be those of suspicion, of persecution, of changed personality, etc. In these cases, however, the intellect is much more involved—their tendency to disappear is, however, much greater than in the former kind. The immediate cause, as exhaustion, fear, worry, alcohol, toxic agents of various nature, being removed, they cease.

While delusions are, as we said, not necessary to a diagnosis of insanity, they are of great importance and perhaps the strong-

est evidence, when observed, that we possess. This is true in a medical as well as a legal sense.

The law, however, requires that the delusion shall have reference to the particular act committed, both in civil and criminal relations, and it is here that the great difference between the medical and legal aspect of the question of insanity manifests itself.

Another element in delusions is of great importance; that is, the concealment of them by the insane.

This is especially observed in systematized delusions; here the intellect not being involved to so great an extent, the person may with great cunning suppress them. A patient who has been many years under observation, and who considers himself a great mathematician as well as the inventor of a theory in regard to the ocean tides, has a systematized delusion of persecution.

Ordinarily nothing can be elicited from him in regard to it —to the general observer, he has the appearance of a dignified, learned gentleman. So long as he can see no object in speaking of himself the delusion is concealed; if, however, he thinks he has before him a person or audience with influence, he becomes loquacious to a degree in the expression and defence of his delusion.

Concealed delusions are of great importance in a legal aspect, and many instances could be cited from the courts showing how court and jury have been deceived by the cunning and skill of an insane person.

Lucid intervals may occur in the course of mental disease, and are of importance in a legal sense. Bucknill and Tuke define them "as consisting, not in a mere cessation of the violent symptoms of the disorder, but an interval in which the mind, having thrown off disease, has recovered its general habit. The party must be capable of forming a sound judgment of what he is doing, and his state of mind such that any indifferent person would think him capable to manage his own affairs." Ordronaux defines a lucid interval as "a suspension of the active manifestations of mental disorder. It does not imply complete restoration; it simply means restoration to a degree of enabling the party to judge soundly of the act." Lucid intervals not infrequently occur in melancholia and

mania, lasting sufficiently long to enable the patient to be fully cognizant of the legal responsibility of his acts, whether in civil or criminal relations. "In regard to criminal offences committed during a lucid interval, it is the opinion of many alienists that no person should be convicted under such circumstances, because there is a probability that he might at the time have been under that degree of cerebral irritation which renders a man insane. This remark applies especially to those instances in which the lucid interval is very short" (Taylor[1]).

A lucid interval in a legal sense, therefore, implies that a condition may arise during the continuance of mental disease, in which the individual may be able to understand his relations to the outer world; especially does this apply to his civil capacity. Where the act carried out is consonant with what is known of the character and wishes of the person, there seems to be nothing out of the way in this view. In a medical sense, especially in the so-called functional psychoses, it would seem reasonable to expect that in mental disease, as in the delirium of typhoid fever, there could occur intervals in which the self-consciousness would be able to reassert itself for a longer or shorter period.

The burden of proof in these cases would naturally rest with the side making the assertion. It is difficult to define the difference between a remission and a lucid interval, except perhaps, as we might say, the latter is more complete than the former.

In a remission there is a mere abatement of the symptoms. It has been said that a lucid interval is only a more perfect remission, and that, although the lunatic may act rationally and talk coherently, yet his brain is in an excitable state, and he labors under a greater disposition to a fresh attack of insanity than one whose mind has never been affected.

Of this there can be no doubt, but the same reasoning would show that insanity is never cured, for the predisposition to an attack is undoubtedly greater in a recovered lunatic than in one who is and always has been perfectly sane. Even admitting the correctness of this reasoning, it cannot be denied that lunatics do occasionally recover for a longer or shorter period to such a degree as to render them perfectly conscious of and legally responsible for their acts."[1]

[1] Taylor's "Medical Jurisprudence," 11th ed.

The statement that a lucid interval "consists not in a mere cessation of the violent symptoms of a disorder, but an interval in which the mind, having thrown off the disease, has recovered its general habit" (see Collinson on "Lunacy"), is hardly correct, for while we observe a return to a reasonable judgment in his acts, and "that any indifferent person would think him able to manage his own affairs," still it is rarely that we can say that there is a return to a normal state. The emotions still remain affected, the intellect shows evidence of improvement indeed, but were there a complete return there would no longer be a question of insanity at all. The law, in its attempt to be precise or exact, passes beyond the bounds of the probable or possible.

Memory is involved in all forms of insanity. When the consciousness is much affected, as in a profound condition of melancholia, it may be almost a complete blank. In mania, with its rapidity of ideas, it may appear as even accentuated, but this in reality is not the case. The passing conceptions have lasted for so short a period individually that they have made no permanent impression. All perceptions and conceptions require time and intensity to be properly received into the consciousness and be capable of recall—the image must at one time be a distinct one.

This loss of memory refers especially to matters of the present; past history may remain as clear in the consciousness as ever. While these statements are true in the main, yet even in profound depression it is not rare to find that the individual can recall many if not all of the incidents that have occurred. This is not so often true in mania. In dementia there may be a complete loss of memory, but this is general in character, no idea of time, place, or even of the identity of the person himself remaining.

More important are the temporary losses of memory during special emotional or paroxysmal conditions, as in the mania following epileptic seizures, or in cases which have been defined as mania transitoria. The importance of this condition is very apparent in a legal aspect. A complete blotting-out of all previous experiences may take place, the patient living only in the present, so that there are really two individualities. Rare instances in certain forms of mental disease are recorded, when, in

passing from one state to another, no recollection of the previous state is recognized in the succeeding one. Persons met or places seen are no part of the experience in the separate states. These statements are always to be received with caution, however, especially if any motive can be suspected.

Delirium is "a perversion of the mental processes, the perversion being manifested in speech or action. The disturbance is characterized by incoherent speech, hallucinations, illusions and delusions, restlessness, watchfulness, apparently purposeless actions, inability to fix the attention. Delirium in a general sense implies disorder of the mind, and according to this definition is equivalent to insanity." [1]

From the fact that in delirium the patient is subject to delusions frequently accompanied by hallucinations and illusions of sight and hearing, this term is frequently used for, and confused with, delusion.

While delirium, either active or quiet, is often present in well-defined mental disease, it is more frequently due to either the exhaustion of the disease or accompanies the initial acute onset as in acute mania. It is rather a physical sign of mental disorder, following upon the various false perceptions and conceptions.

It is a mistake to speak, therefore, of various forms of delirium, as delirium grandiosum, delirium epileptoid, etc. The condition is simply the result in the first case of delusion of grandeur and general exaltation common to mania and especially to the earlier stages of general paralysis.

The proof of this statement is shown by the fact that in the various fevers, as typhoid and pneumonia, or in toxic conditions caused by various drugs, similar stages are common, and while they are truly mental disturbances, and therefore manifest themselves by disturbances in the field of feeling, thought, and volition, we do not consider such states as forms of mental disease.

In a legal sense the question would naturally and only arise in regard to responsibility, and the general rule would apply that where there is such a loss of consciousness as to prevent any knowledge of the act, all responsibility ends.

Heredity as an aid in diagnosis is of vast importance, as

[1] Tuke: "Dict. of Psych. Medicine."

can be seen from the importance in which it is held, as an etiological factor. It has especial value when the disease is directly received from the parents or even when a predisposition to mental disease can be presumed from the existence of various conditions in the parents or even collateral branches, as nervous diseases, alcoholism, or consanguinity. It is admitted as legal evidence in criminal and civil cases.

"The degree of hereditary taint may to a certain degree be ascertained and estimated. Thus the insanity of one parent would indicate a less degree of predisposition than that of a parent and an uncle, and still less than that of a parent and grandparent or of two parents. The insanity of a parent and a grandparent with an uncle or aunt in the same line, may be held to indicate even stronger predisposition than the insanity of both parents. The influence of the insanity of parents in creating a predisposition will depend to a great extent upon whether it has taken place before or after the state of parentage commenced. The insanity of a parent occurring after the birth of a child, if it arises from a cause adequate to excite it, without previous predisposition, would, of course, be held as of no value in the formation of an hereditary tendency. The insanity of brothers or sisters may be of much or little value, as evidence of predisposition, according to the circumstances under which it has shown itself. If several of them, both older and younger than the patient, have become insane, the fact shows strongly in favor of predisposition, although neither parent nor grandparent may have been lunatics; since it is well known that other conditions in the parent besides that of actual insanity may create this predisposition; for instance, violent and habitual passion, the debility of old age, and most of all, habits of intemperance at the time of procreation. It will thus be seen that the evidence of hereditary predisposition may be of such a character as to render the insanity of the patient an event in the highest degree probable; or, on the other hand, it may be so weak as to add a scarcely appreciable amount of probability to the character of the disease." [1]

Previous attacks must be considered as strong evidence in favor of insanity, especially when the act committed bears on its face signs of being irrational or lacking motive. Its

[1] Bucknill and Tuke: "Psychological Medicine."

importance is much increased if it can be shown that the present attack commenced in a similar manner with the previous one. It has long been observed that succeeding attacks follow the same course, even in detail, of those preceding them.

This can be observed in periodical insanity, and is of special interest, as months or years may elapse between the different seizures.

Again, complete recovery from even the simple psychoses is difficult to predicate, as there is frequently left a change or at least an instability in the emotional and intellectual condition.

Slight attacks, if due to some adequate cause, as domestic loss, financial reverses, injuries, or some special illness as fevers, have not as much weight.

While these special signs of mental disease are more or less marked in every case, there is also to be observed the general change in the individual himself. A most important indication is whether the disposition, which may have been lively, has become the reverse, whether extravagance or parsimony is present in contradistinction from the usual habit.

Excesses, alcoholic or venereal, occurring in a person whose life has been previously correct, even without any evidence of delusion or other signs, is significant.

Somatic Indications.

Physical or somatic conditions are of importance, especially in certain forms of mental disease, as *tremor*, *paralysis*, *loss or exaggeration of the reflexes*, *contraction or inequality of the pupils*, *interference with articulation*, which may become involved or clumsy, interference with general nutrition, etc.

Hæatoma Auris—Insane Ear.—Among the insane, especially the chronic, this affection of the ear is not uncommon. Is is difficult to say that it can be regarded as a sign, for we find it among the sane, especially pugilists, who are exposed to blows in this region. M. D. Field showed this in a number of cases which he described among this class of professionals.

However, it cannot be denied that, outside of the consideration of injuries received by the insane, this condition appears very frequently, and must be regarded as an indication of defective nutrition.

Facial Expression in the Insane.

Various types of mental disease are often characterized by special facial expression. Physiognomy is of considerable importance, especially in the class of patients coming under the head of the so-called degenerative types. We find among the insane irregularity of features, especially noted in the ears, which show various malformations in the structure of the helix or rim of the ear, and in the lobe. The former is not infrequently very much flattened so as to be almost absent. The lobe is often adherent or deficient. There may also be a tendency for the ears to stand out far from the head. The whole structure may be very much deformed. This condition is usually a congenital one.

The eyes and orbits are also frequently irregular, the almond shape being not uncommon, or one eyebrow being higher than the one on the opposite side, or there being an inequality in the size of the eyeballs.

The nose and jaw may show peculiarities, and there is not infrequently facial asymmetry. The cranial measurements show asymmetrical conditions or excessive developments beyond the physiological limits. The palate, especially in congenital conditions, is frequently very highly arched.

Many of the insane, it must be remembered, however, present almost classical features and typically correct cranial measurements, while excessive deviations are frequently observed among our most distinguished and highly gifted men.

The expression of the face as shown in various well-defined mental disorders can be classified under a few heads. In melancholia the angles of the mouth are usually depressed, the forehead wrinkled, the eyes downcast, and there is an appearance of despair associated with mental anxiety. The features are also extremely immobile and fixed. This condition has various grades of development. At times, the mental agony, as expressed in the wrinkling of the forehead, is the essential feature. Where the dementia is more marked and mental action has been more completely stopped, the simple depression as shown in the lower part of the face and mouth is the most prominent feature. Delusions, if present, of sight or hearing,

will again give an expression of attention in these directions, the patient appearing to see and watch for something or to listen attentively. If fear be present, the attitude will be expressive of this condition.

Fig. 1.—Melancholia.

In mania there is the reverse of what has been described. The features are mobile, constantly changing, and there is an appearance of pleasure and exaltation. The eye is bright and constantly changing its position. Here the hallucinations come and go more rapidly, and lead to a marked facility of expression, changing with each new emotion. Fear and delusions of persecution show themselves by an alertness of expression and an energy of resistance. (See photographs of Mental Disease.)

In paranoia, while perhaps not showing any well-defined expression, to the experienced eye the face reveals a sense of general self-satisfaction which is peculiar to the disease. Vanity and personal pride in their physical appearance is a marked feature. The fear of opposition or persecution so commonly present, but ascribed to envy of

Fig. 2.—Mania.

personal attainments or ability, or physical superiority, is here seen.

FIG. 3.—Dementia.

Dementia manifests itself chiefly by loss of expression, or vacuity. This is interrupted from time to time in less advanced cases by expressions of joy or depression, according as the emotions are excited by corresponding delusions or hallucinations. In chronic cases where the delusion has become fixed, the expression remains permanent and depends on its nature.

FIG. 4.—General Paresis.

In general paralysis the face is characteristic of the disease. There is usually a washing-out of the particular lines characteristic of the individual—a blankness and flatness almost diagnostic of this disease. There is rarely, however, any appearance of depression or anxiety, but rather that of fatuous placidity.

Too much importance has been attached to the facial expression in the insane, the rolling eye, the hair standing erect, giving a wild appearance to the individual. The hair may become coarse and thick in chronic mania, and in melancholia it may become thin; these states are, however, dependent on the general state of nutrition. Certainly in acute cases of mania I have not observed any special change. The scalp may in cases, usually of imbecility or dementia, especially in hereditary or congenital diseases, be formed into folds or rugæ. Some such cases have been reported, and I have had one under my observation—the hair was coarse and thick. Many of these ideas have been handed down by tradition. The malingerer usually attempts such a characterization.

Changes in Manners and Habits.

An important sign of mental disease is a complete change in manner of living and in dress. The more distinct this is, the more valuable does it become. If a sedate, methodical man becomes prodigal and profligate, or if he becomes depressed and sees nothing but ruin and loss when there is no cause for it, we must regard it as a strong indication of mental disturbance. It is necessary to inquire carefully into the previous habits; often latent tendencies, when the balance of self-control is removed by disease, will develop themselves. Every one is more or less influenced and controlled by his surroundings; what makes a person honest or moral is frequently simply his regard for the opinions of others; if this feeling is removed by emotional excitement or depression, acts of a character entirely foreign to what has been known of the character of the individual may be committed.

The appearance and dress are often strong indications of insanity.

The emotion which is predominant, or *the delusion which prevails*, frequently leads to gross carelessness in dress; a general lack of order and method in all personal arrangements, and in home and business relations is usually present. Erotic tendencies may lead to ornamentation of the person, or to indecent exposure of the person. Again, if the delusion of being some important personage is present, there may be a tendency to

decoration of the person with innumerable medals, often of a perfectly valueless character.

An epileptic long under my observation always decorated his coat with any badges of the various societies, city departments, as the police, fire, etc., which he could obtain. These were of absolutely no value, but afforded him infinite pleasure, as showing the importance with which he was regarded.

This is especially noticed in the chronic insane, who are apt to decorate themselves with any bright colors which they can obtain.

Sudden changes are of especial significance. Mere exaggeration of natural characteristics does not have so much weight.

Due consideration must also be given to a provocative cause if present. Loss of friends or property, or any annoyance, produce an exaggeration of feeling and action, which, although normal in character, is increased beyond that found in the sane. The action and gestures are important, different forms of mental disturbance manifesting themselves in special ways. The maniacal are restless and constantly in motion; they never seem to tire, their muscular system seeming to correspond to their mental state. As no two thoughts or ideas are the same or continue long, so their motions and gestures never remain long the same. In depression the attitude is often expressive of the despair within them. "It cannot be called acting, since it is real, and hence arises the most frequent cause of failure in attempts to simulate insanity."

Eye Symptoms.

These are of importance more especially in organic diseases. There cannot be said to be anything diagnostic in them in the so-called functional psychoses, as melancholia or mania, as they are not constant, depending on the physical state or nutrition.

Dr. Clifford Allbutt found in fifty-one cases of mania in the West Riding Asylum, which he examined, anæmia of the optic disc.

In general paresis inequality of the pupils is common, or there may be marked myosis. The Argyll-Robertson pupil is also present and perhaps has especially connection with cases involving disease of the spinal cord. According to Mickle in his work on general paresis, marked contraction of the pupil

succeeded by dilatation is a bad sign. The optic nerve not infrequently shows evidence of hyperæmia in general paresis, and it may even go on to atrophy. These conditions are not present, as a rule, except in the later stages of the disease. Rarely do we find ptosis or strabismus.

Aphasia in Insanity.

Aphasia is generally due to a lesion within the brain involving the cortex area for speech or regions in the internal capsule, pons, and medulla. The motor centre for speech in the cortex is in the third frontal convolution, while the sensory perceptive centres are posterior, in the parietal and temporal lobes. The two forms of aphasia are motor and sensory. The former represents an inability to articulate words with or without a loss of memory of the word or name itself. Sensory aphasia implies a loss of the power to understand spoken or written language, resulting in word-deafness or word-blindness. This latter condition especially indicates some mental impairment, and in fact in most cases we find loss of emotional control. Such persons are easily provoked to laughter or tears. The memory of present events may be impaired.

The question of responsibility, civil or criminal, is one of considerable importance in these cases. It is perfectly possible, especially in motor aphasia, for the patient, although unable to speak, to possess a full comprehension of his surroundings and of what is presented to him, either in words or in writing. In sensory aphasia the question is more doubtful, if neither writing or spoken language is intelligible. This latter condition in the double state is, however, very rare, and if the disease were so extensive, other symptoms showing marked evidence of dementia would probably be present. Where, therefore, as in making a will or executing legal documents, there is nothing inconsistent with the previous character of the patient in the statements made, or where no motive is shown which is contrary to what would be naturally expected from the previous character and actions of the patient, the person should be considered as capable, and as possessing sound reasoning power. This is often of great importance where estates have been devised away from the immediate relations.

Aphasia as a symptom in mental disease is commonly ob-

served in general paralysis. It is usually of short duration and liable to recurrence. It is frequently associated with hemiplegia and in most cases due to a meningeal hemorrhage. It, however, occurs at times as an isolated symptom and is of importance in point of diagnosis.

This is not to be confounded with the difficulty of articulation which is one of the common symptoms in paresis.

It is usually in connection with paralysis, *i.e.*, hemiplegia, that we have to consider aphasia, and especially in civil cases. The well-known Parish will case is an example.

Masturbation should be regarded as a symptom rather than a cause of insanity. It occurs in various forms of insanity, as paranoia, for example; in fact, most cases of so-called masturbational insanity are to be classified with this disease. We especially note the erotic and religious type. It is common also among epileptics, general paretics, and in dementia resulting from melancholia and mania. It is a sign of mental impairment, indicating a loss of the higher ethical nature of the individual. It may occur as a symptom in senility, where the most shameless and open practice of it may be carried on. Savage refers to a case in a chronic lunatic of over ninety years of age.

The same is observed among idiots and imbeciles. It may exist as an exciting cause of insanity or as an active agent in continuing the mental disorder, and, by its effects on general nutrition, prevent recovery.

"**Handwriting** must be looked upon as a highly developed method of muscular expression, and as such will be affected by any nervous states or conditions which affect the nervous control and the distribution of nervous energy. Persons suffering from any form of nervous exhaustion will show it in their methods of expression, the result being want of clearness and definiteness." [1]

We have two points to consider in the letters of the insane, the contents and the handwriting itself.

In some cases they are a direct help in diagnosis, especially in the formation of the letters as evidencing tremor or again in the omission or repetition of certain letters in a word.

This is especially seen in general paralysis of the insane;

[1] Tuke: "Dict. of Psych. Medicine."

early in the disease, perhaps one of the first signs to be observed when the person has acted in the capacity of an accountant, there will be tremor causing indistinctness of the lines—again misspelled words are frequent. At times again the letters form no definite word.

In the first three specimens here shown of well-marked general paresis—all represent educated men. Fig. 5 was an expert

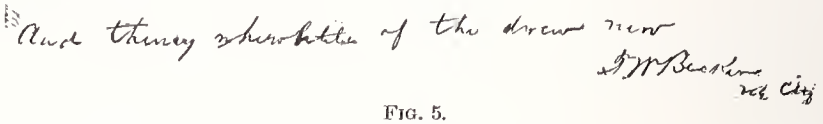

Fig. 5.

accountant. The attempt to write, "And they whistled as they drew near," is unintelligible; there is, however, very little tremor.

The confusion in the formation of the words is not unlike the indistinctness of the articulation in these cases.

Fig. 6 is a letter of an educated man, a lawyer and college

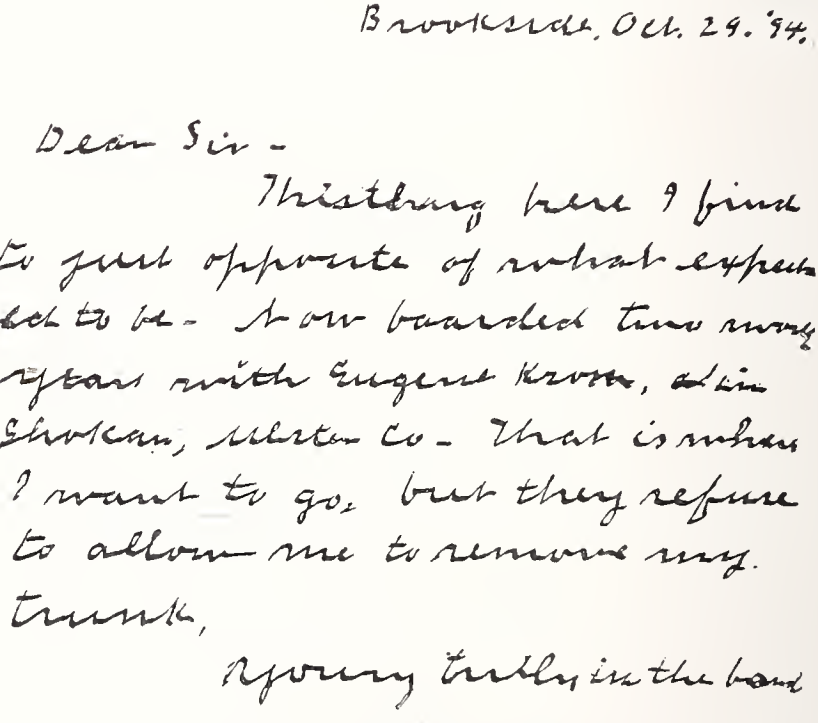

Fig. 6.

graduate. The tremor is well marked, and the omission of certain words necessary to complete the sense. There is no

structure to the sentence and the two words "this" and "thing" are run into one.

Fig. 7 is an instance showing the mental confusion, the misspelling, the repetition of syllables, and the tremor characteris-

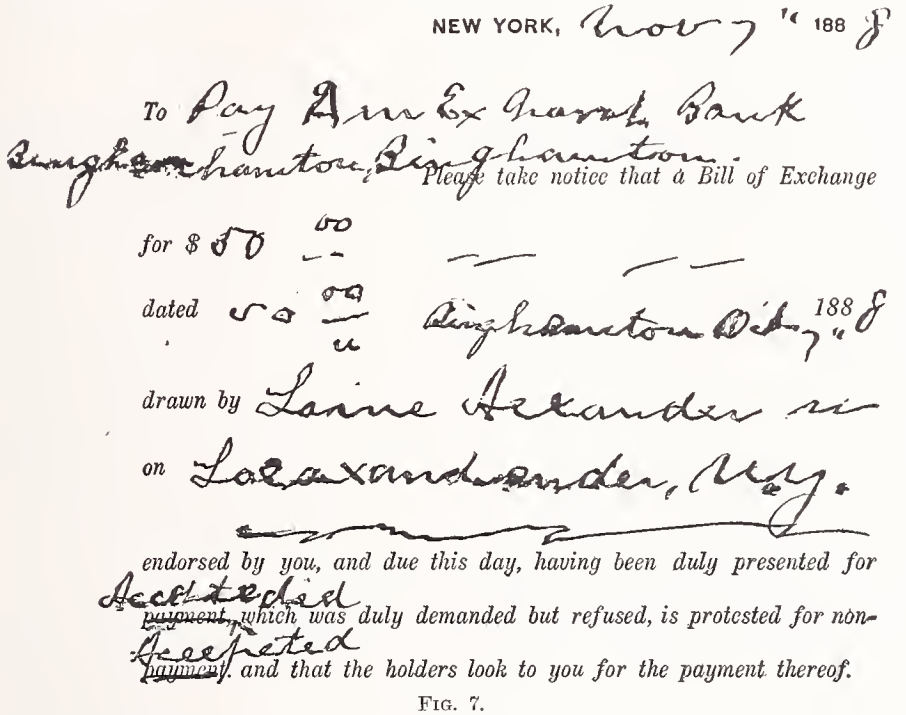
NEW YORK,
188
To
Please take notice that a Bill of Exchange
for $
dated
188
drawn by
on
endorsed by you, and due this day, having been duly presented for
payment, which was duly demanded but refused, is protested for non-
payment, and that the holders look to you for the payment thereof.

Fig. 7.

tic of these cases. This man had for years been engaged in serving notice in cases of notes going to protest.

One peculiarity in most of these cases is the apparent absolute ignorance of anything wrong about their productions; they appear perfectly satisfactory, and even when unable to read them, they are satisfied. This is the case long before the final stage of dementia has taken place, and while the delusions of grandeur and ideas of great wealth and wonderful plans are most prominent.

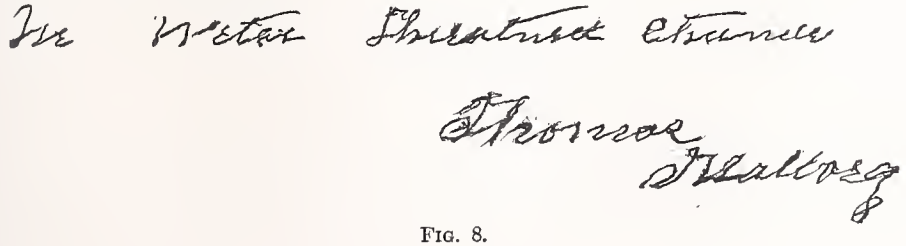

Fig. 8.

Figs. 8 and 9 illustrate the excessive tremor which is commonly present.

Tremor alone is insufficient to form a diagnosis on, as it is

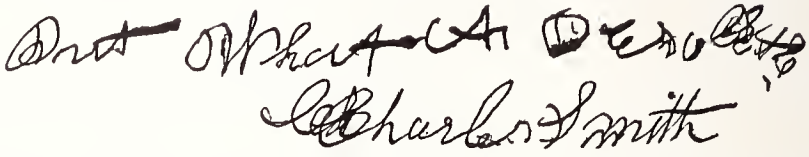

Fig. 9.

present in various other conditions, as in alcoholism, mercurialism, old age, etc.

In chronic mania there is a tendency to almost endless letter-writing, one subject being followed by another. No class of patients in our asylums are such voluminous writers as these. Here we find special characteristics, as the underscoring of words, the frequent use of capitals. This is especially seen in paranoiacs, where the egotism of the writer becomes very apparent. Where delusions pertaining to religion are present, the words God and Christ are very frequent, and usually underscored and in large letters.

Rhyming is not infrequent.

The letters may be the only sign for a long time of any mental disturbance and are of importance in this direction. A delusion may be concealed before others, but the strong belief in it may find expression in letters. *This is often observed in paranoia.* Letters of the most obscene character may be written.

The contents are often diagnostic of the form of the disease. In mania we have long epistles, carelessly written, with frequent omissions of words and letters; in hypochondria there is the dwelling on the personal ailments in great detail, the various hallucinations and delusions are minutely described. This is not rare among melancholics. Tuke quotes Dr. Bacon's summary of the important points of handwriting in relation to the insane as follows:

(1) The handwriting as illustrating chronic insanity; (2) as illustrating acute attacks; (3) as rarely the only evidence of insanity; (4) as a sign of convalescence; (5) as evidencing an oncoming attack; (6) as illustrating phases of cases of ordinary mania; (7) as showing the changes in handwriting in general paralysis.

In concluding the description of the indications I would designate the conditions of melancholia or depression and mania or exaltation as mental states, rather than definite diseases. In taking up the various forms of insanity, we shall observe that both these conditions are common to all the various forms of mental disease.

Dementia can be considered as the final stage toward which all insanity tends, where recovery does not take place.

In its completed form there is absence of the functional activity of mind. We have, therefore, an absence of all perception and conception; there is merely a vegetative existence. Hallucinations and delusions are absent, only the somatic signs, as interference with nutrition, tremor, pupillary changes, etc., are present.

Melancholia is "a condition of depression marked by a feeling of misery in excess of what is justified by the circumstances in which the individual is placed" (Kirchhoff).

Mania, like melancholia, is one of the primal elements of mental disease, and is a term which has been used from the earliest days. In our simpler classification it represented one of the chief forms of insanity, as melancholia did on the other side, the final stages of both these conditions being represented by dementia. This classification was long used, and is still employed in our hospitals, all cases being put under those three heads irrespective of the varying conditions under which they appear. Of late years, we know that mania may appear in various well-defined mental states which represent distinct diseases, and of which mania itself is simply one of various symptoms—as, for instance, mania in general paralysis, in hysteria, in puerperal fever, or again in alcoholism, etc.

Mania may be defined as consisting of great excitement characterized by increased mental activity, as shown in the great number of mental impressions or perceptions constantly received, and most frequently given out by continuous speech.

General Pathology.

In our classification of mental disease based on the pathological condition found in the brain, we divide insanity into the so-called functional and organic forms. Among the former we

do not find evidence of marked disease of the vessels of the brain, its membranes or structure ; while in the latter we find changes in some or all of these structures. In mania and melancholia, functional diseases, anæmia or congestion is present. In melancholia there may be a tendency to thromboses of cerebral sinuses, especially the longitudinal sinus. It is probable, however, that many of these thromboses occur a short time before death, so that it is questionable whether they can be considered as etiological factors in the disease. Hyperæmia, active or passive, is always difficult of recognition post mortem; similar conditions are frequently found in cases associated with high temperature, with or without delirium, in which no evidence of mental disturbance has been present clinically; while again in some cases of *mania grave*, slight, if any, changes outside of congestion, which may not be marked, are found. Anæmia of the brain is present in most diseases of an exhausting nature, as phthisis, and while in phthisis we not infrequently have insanity of a definite type peculiar to that disease, it is on the whole rare. In the so-called degenerative types of mental disease where heredity is an important factor in its causation, or where insanity has resulted in the course of well-known neuroses, such as epilepsy, hysteria, neurasthenia, and hypochondria, no definite pathological changes characteristic of these diseases have been found. In the more chronic forms of these so-called functional diseases, where secondary dementia is present, it is not unusual to find arterial changes, as thickening of the walls of the vessels, or an increase in the neuroglia tissue, with atrophy of the nerve cells and nerve fibres. These changes, however, are not distinctive of these special diseases, either as to localization or as to character, not infrequently being present where mental disease has not manifested itself. In some cases of epileptic insanity, it has been held that the frontal lobes show special signs of atrophy, or that the temporal lobes (Meynert) give evidence of connective-tissue changes with cellular degeneration. In organic diseases of the brain, as in general paralysis of the insane, we find inflammation of the dura mater with thickening associated with great increase of new blood-vessels, which frequently, on account of the thinness of their walls, lead to hemorrhages giving rise to pachymeningitis interna hemorrhagica. Again, there may be thickening of the

pia mater with adhesions between it and the dura mater as well as the brain substance. The structure of the cortex of the brain gives also evidence of disease, being atrophied and showing slight punctate depressions which give it a worm-eaten appearance. This is probably caused by obstructions in the small capillaries entering from the pia into the substance of the brain. We not infrequently find along lymph tracts deposits of a hyaline nature. The vessels themselves are frequently thickened, and probably the seat of slight cortical hemorrhages. The neuroglia tissue is increased; the nerve cells are atrophied and vacuolated, their processes lost, and in their interior we find granular substances, pigment, etc. The association fibres which connect functionally adjoining groups of cells and different areas of the brain are also involved, explaining perhaps the loss of association of ideas, and consequently of memory and judgment so frequently seen in general paresis. In syphilitic insanity we find changes pointing specially to arterial disease. The walls of the vessels are thickened, and an infiltration of a gummatous character decreases the lumen, leading to atrophy following loss of nutrition from partial or complete thrombosis. We may thus have in these cases more or less dementia. Insanity dependent upon alcoholism generally shows affections of the membranes of the brain, while in the brain structure there may be diseased vessels with increase of the neuroglia tissue and atrophy of the cortex cells. It is not surprising, therefore, that both of these latter diseases may have symptoms resembling general paresis, and may be not infrequently taken for that disease. In idiocy and imbecility, we have to deal with defective structure of the brain. The defects found are either atrophy, as seen in microcephaly or hydrocephalus with enlarged ventricles resulting in great decrease in the depth of the cortical substance; or we may find partial or complete absence of certain portions of the brain structure, as the greater part of the cerebrum, the basal ganglia only being present. The morbid changes in imbecility are of a similar nature, but the lesions have not been so destructive. Many of these changes seem inadequate to explain the various forms of insanity in a clinical aspect. H. A. Tomlinson, in a recent article entitled "The Inadequacy of the Morbid Changes Found

Post Mortem to Explain the Manifestations of Insanity," well says after a study of twenty-four cases: "A further proof of the want of significance of these changes in explanation of mental perversion is found in the facts that in an individual, no matter whether the condition be one of violent delirium or profound depression, if the attack has been acute, identical changes in the cortex and meninges will be presented, sometimes varying in their locality and extent, but never materially in their character. Again, there appears the implication that these may not stand in the relation of a causative factor to the mental perversion, and that the histological changes found do not result directly from the manifestations of mental perversion, but indirectly through impaired nutrition and exhaustion following in the wake of excessive motor activity accompanying insanity —an auto-intoxication resulting from impaired or inhibited somatic activity. A further fact seldom referred to, but stated elsewhere by the writer in this relation, is the evidence furnished by primary and terminal dementia. Either of them may, and often do, proceed to a degree involving mental annihilation without interfering with the somatic activities which are automatically performed, and yet post mortem no distinct histological changes are to be found. Whether mental activity is represented in the most unstable cells of the cortex independently, or whether, as I believe, it is represented synchronously with motor generative activity, and is the reflex of an association of all somatic activity, has not been demonstrated, and may not be capable of demonstration; but the latter would seem to be the most reasonable assumption from the data we have; especially as it will most definitely explain the absence of distinctive changes in the mental perversion, and the uniformity of change in associated mental and somatic impairment or destruction. The first point to study in the pathology of insanity is that we have to deal with alterations, not destruction of function. The activities involved are the same in amount and kind in both normal and abnormal mental function."

Nothing definite has been established in regard to the so-called criminal brain. The Italian school, especially among others Lombroso, have brought forward many interesting facts in reference to the convolutions and fissures in their efforts to establish a special type, but they are far from conclusive.

The weight also shows but little difference from those of the normal brain. Bischoff[1] compared 137 brains of criminals with 422 normal, and found but little difference.

The difference between the two hemispheres is not significant. Giacomeni found in 42 criminal brains the right hemisphere heavier in 20 cases, the left in 18, while 2 were equal.

Benedikt reports that in 16 criminal brains he found the cerebellum not covered by the cerebral hemispheres in six instances, and in three cases but partially so.

The author is a strong advocate of the criminal type of brain.

Bevan Lewis remarks that "our studies of the pathology of insanity would impress us with the important principle, that whenever the nervous elements of the cortex are primarily the seat of disease originating mental derangement, then the implication of the sphere of mind tends always to be more generally or universally involved; but where the nerve changes are secondarily induced as the result of vascular disease, the greater tendency is shown toward a local or partial implication of that sphere. Hence we find that whereas in ordinary uncomplicated acute insanity (acute mania or melancholia) the territorial implication is a very general one, although invariably expressed at certain sites more than at others; yet that in certain insanities (*i.e.*, general paralysis) special sites of election are taken by the diseased process, one area being affected after the other, until ultimately the localizing character of the ailment fades into a widespread general implication."

CLASSIFICATION.

"The exigencies of affairs compelled the lawyers themselves to construct one of the earliest classifications of insanity, namely, that well-known one of Lord Coke, who divided insane persons into (1) idiots from birth; (2) the accidentally insane who have wholly lost memory and understanding; (3) those who have lucid intervals; and (4) those who deprive themselves of understanding by vicious actions, as drunkards. Like all kinds of insanity which have any interest for lawyers, it is based upon the mental qualities and conditions, and not upon the physical

[1] "Hirngewicht d. Mensch." Wien, 1880.

substratum. It is this point which more than any other we are bound always to bear in mind in the consideration of the diagnosis of insanity for legal purposes." As the writer further says, it is not (disease) as the cause of disease in which law interests itself, but rather the product of that disease. This is, however, only begging the question, for we all acknowledge that insanity is simply a group of symptoms, the result of disease of the brain.

This subject has engaged the attention of all writers, so that we have had presented many and various divisions. The etiological classification has always received many supporters, and has its advantages in so far as it definitely defines the character of the disease. It leads, however, into a very complex subdivision which is of little value in a medico-legal sense. *The law recognizes simply the fact of insanity, not its particular form, it is interested only secondarily in the latter in so far as it explains the degree of impairment of the mental faculties.* "The medical terms are not recognized in law—the legal terms are dementia naturalis, which is equivalent to idiocy and imbecility, and dementia adventitia or acquired insanity."[1]

Krafft-Ebing has in his classification carried out this idea in some respects, as he divides all insanity into that of the undeveloped brain and that of the fully developed brain.

In the first division fall idiocy and imbecility, corresponding, therefore, to "dementia naturalis," while in the second come all the true forms of mental disease or insanity proper, corresponding to dementia adventitia, or acquired insanity.

He further bases his division of the various forms of insanity on the pathological changes found. All insanity must be ascribed to disease of the brain, either of a functional (nutritional) or organic character. Under the first head will come the so-called functional forms of mental disease, as melancholia and mania, and also he includes here the large class of degeneratives in which the element of heredity is the most important factor, as well as the forms of insanities following from the various neuroses, as epilepsy, chorea, etc. Under the second head are included those diseases due to organic disease of the brain. We have here a practical basis for subdivision of the

[1] J. Dixon Mann: "Forensic Medicine and Toxicology."

various forms of insanity, retaining the advantages of the etiological plan.

The attempt to divide insanities into those affecting the emotions and those involving the intellect and will, as has been done by Griesinger and Maudsley, seems to be based on a false principle. It is rare to find a distinct form of either class. If we include melancholia and mania as under this head, and as therefore being essentially emotional states, we are confronted with many cases where the intellect is also affected as shown by the presence of well-defined delusions. This last-named state implies an affection of the intellect, for delusion cannot take place without thought or conception. Again, in delusional insanity or the various organic forms, as general paresis, there is always emotional disturbance. We must conceive of the mind as a whole, in which no one element can be affected without to a greater or less extent affecting the integrity of the rest.

There is no doubt, at times, an involvement of the emotions, almost to the exclusion of the other function, and as a rule it does not imply as serious a lesion.

With some few modifications I will give Krafft-Ebing's classification:

A. Psychical Disease of the Developed Brain.

I. Functional neuroses or diseases without a pathological basis.

(1) *Melancholia* (inhibition of mental action).
   a. Melancholia simplex.
   b. Melancholia cum stupore.
(2) *Mania.*
   a. Mania with exaltation.
   b. Mania with frenzy.
(3) *Confusional insanity*, or primary dementia.
(4) *Stuporous insanity.*
(5) *Secondary dementia.*
   a. With agitation.
   b. With apathy.

II. Psychical degenerations, that is, diseased conditions of the developed brain, inherited or acquired.

(1) *Constitutional affective insanity* (folie raisonnante).

Moral insanity.
Impulsive insanity.
Transitory mania.
Kleptomania.
Pyromania.
Dipsomania.
Homicidal mania.
Suicidal mania.

(2) *Paranoia.*
a. Primary.
b. Acquired.
1. Typical form (with delusions of persecution and grandeur).
2. Questioning paranoia.
3. Religious paranoia.
4. Erotic paranoia (sexual perversion).

(3) *Periodical insanity*—circular insanity.
(4) *Insanity from constitutional neuroses.*
a. Neurasthenic insanity.
Agoraphobia.
Claustrophobia.
Aërophobia.
Zoöphobia.
b. Epileptic insanity.
c. Hysterical insanity.
d. Hypochondriacal insanity.

III. Cerebral disease with constant pathological changes, or organic psychoses.
(1) *Acute delirium.*
(2) *General paresis* (dementia paralytica).
(3) *Syphilitic insanity.*
(4) *Alcoholic insanity.*
(5) *Senile insanity.*

B. Arrested Cerebral Development.

(1) Idiocy.
a. With predominant intellectual defect.
b. With predominant ethical defect (primary moral weakness).

The mere statement of the varieties of insanity as given by the College of Physicians may be useful, although it can scarcely be placed under the head of a classification:

Mania.
Melancholia.
Dementia.
Imbecility.
Idiocy.
General paralysis.
Puerperal insanity.
Insanity of puberty.
Climacteric insanity.
Senile insanity.
Toxic insanity (alcohol, gout, lead, etc.).
Delirium tremens.
Traumatic insanity.
Insanity associated with obvious morbid change or changes in the brain.
Consecutive insanity, from fevers, visceral inflammations.

SPECIAL FORMS OF INSANITY DESCRIBED.

Following our classification we first take up the simple psychoses and those mental diseases characterized by a loss of responsibility in civil and criminal relations.

Melancholia.—Melancholia is characterized by marked mental depression, with or without cause. There is usually what may be termed mental neuralgia; the patient is centred in himself, and ascribes his trouble to some act of his own. Hallucinations, illusions, and delusions may or may not be present. Those of hearing are more common than those of sight. Voices condemnatory in character are not infrequently heard. Sin against God, which is held as unpardonable, is frequently assumed. Life becomes wearisome from the tedium of one constant idea which cannot be driven away, and which absorbs the patient to the exclusion of all other thought. In extreme cases he is unconscious of his surroundings, and frequently assumes an attitude of despair or one of petition. The physical condition manifests itself by marked anæmia. loss of appetite—dependent often upon delusions, as of the fear of poisoning—emacia-

tion, and insomnia. The pupils are frequently dilated, the pulse is slow and feeble. This condition may remain for several weeks or months, the earliest signs of recovery manifesting themselves by the recognition on the part of the patient of his delusions as such, and an improvement in his physical condition,

FIG. 10.—Melancholia. Shows very characteristically the attitude assumed in melancholia of the passive form—suicidal. M. S., female, æt. 21, single; admitted to the hospital March, 1893. Patient has apparently no delusions, but cries and moans constantly and has suicidal tendencies. Death occcured in June, 1894, from phthisis.

principally shown by an increase in weight. The terminal condition of this state, when recovery does not take place, is in secondary dementia.

Melancholia comprises, therefore, all those morbid states in which depression of a painful character is the cardinal symptom. It may more especially involve either the *emotions* or the *intellect*. In the simple form there is usually an absence of delusions or hallucinations; in fact, these are often later

symptoms, dependent upon and arising from the depression (Savage).

Melancholia is indeed a symptom in many of the different forms of insanity, but must in these relations be considered in a different light from the recognized psychosis. In true melancholia there is "a complete process in itself." It passes through certain stages, and its course of development can be followed.

Holtzendorff defines melancholia as a disease the essence of which is a painful depression of mind, which is not justified by any sufficient cause, being an expression of a morbid trouble of the cerebral function. Those affected feel sad without reason, anxious, discouraged, troubled by gloomy thoughts, cares, and doubts. They feel themselves and their relations with the outer world changed; they are indifferent to their interests in life; their usual occupations become difficult, even impossible, for them. Thought is checked; certain painful ideas are constantly before them (compulsory ideas), excluding or driving out all other ideas and thus destroying all volition. There is usually, at least at first, a clear recognition of this state by the patient, so that he feels himself under some mysterious control, often ascribing it to electricity or hypnotism. Subsequently *hallucinations and illusions* of the senses arise, which are not infrequently rather secondary to the depression than its

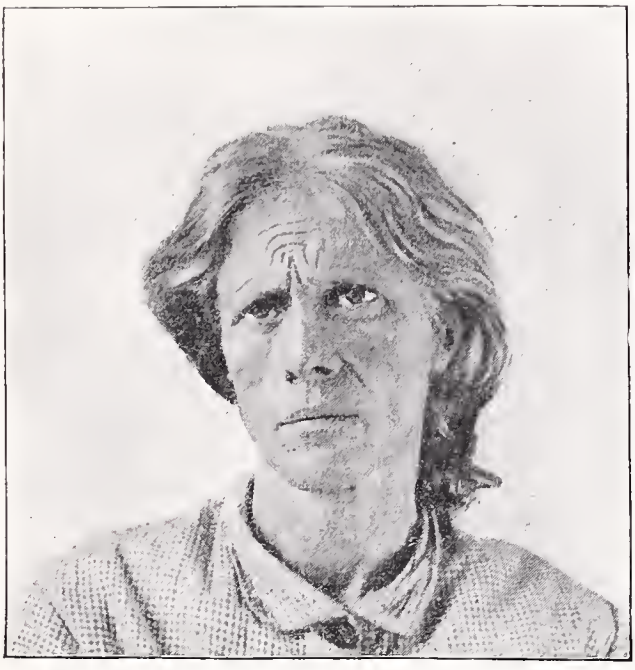

FIG. 11.—Melancholia. Exhibits typical facial expression of anxiety in melancholiacs. Patient, æt. 53, female, widow, had an acute attack at age of 33; had delusions of hearing, and at times is violent.

cause. The mental agony may become so extreme that there is loss of self-consciousness, the individual becoming oblivious to his surroundings. Such conditions (*raptus melancholicus*) may occur in *hypochondriacs*, *epileptics*, *hysterics*, and in *alcoholics*, but the duration is brief and the course of the disease is irregular. The physical and mental symptoms generally go hand in hand. The face has an anxious expression, the forehead is wrinkled, often characteristically, with special lines over and between the eyes (see Fig. 11). The general nutrition is impaired, the digestion is poor, flatulence is common, the skin is dry, the hands and feet are cold and blue, the cardiac action is weak, the pupils are usually dilated. There may be marked insomnia or the sleep may be restless, with little feeling of refreshment on rising. The patient is frequently the victim of subjective sensations of numbness, or there may even be anæsthesia. These states lead to hallucinations or delusions in many cases. A feeling as if the skin were pinched, as described by a man under my observation, was instantly ascribed to spirits about to seize him, and while perhaps laughing at the idea while speaking of it, he was unable to cast it aside when alone. There may be marked mental weakness, even approaching dementia; but this is rare, the patients usually being able on their recovery to relate all the instances, or many of them, occurring during their illness. The refusal to speak or perform any act when requested is often due to a delusion; they may hear a voice advising them not to do it.

The refusal to take food, which is so common among melancholiacs, is usually based on some delusion, rather than sensory anæsthesia to the pangs of hunger. There may be the belief that the food is poisoned or that the stomach is diseased and can no longer digest it. Suicide is common and may be an impulsive act or a deliberate one. Where the fear of being killed is present, to escape from it suicide may be attempted.

A boy, æt. 18, brought up in the lowest part of New York, after losing his position, became depressed and heard voices calling him opprobrious names, with threats of killing him. He applied to the police for protection and was sent to the asylum. He was completely filled with the terror of being killed, crying out constantly for protection and saying that he had done nothing. To escape this constant fear, he attempted suicide.

Homicide is not rare in the agitated or excited cases. Where excessive misery or want has been a causative agent in the disease, there may be the desire and wish to relieve the victims from like suffering, or the fear that, after killing themselves, the children, for instance, may be left without support. Again, when the belief of having committed the unpardonable sin is entertained, there may exist the wish to save others from a like condition. A mother may deliberately kill her children to save them from suffering, as in the case reported by Dr. M. D. Field, which I include here in full.

The Case of Mrs. Wilhelmina C. D. Lebkuchner.[1]—Mrs. Lebkuchner was indicted for the murder of two children. It was shown that on March 21st, 1888, she admininistered "Rough on Rats" to three children, two of whom died.

I saw Mrs. Lebkuchner several times during the month of October, 1888, and from time to time until the trial in March, 1889. I may state that I was called upon to make three reports.

First.—Capacity to plead to the indictment. Was she capable of comprehending the nature of the crime charged, and of aiding her counsel in the formation of a defence, if she had any?

Second.—What was her probable mental condition at the time of the commission of this crime?

Third.—After acquittal, to determine whether she be discharged or committed to an asylum.

First report was as follows: Physical condition poor. Is thin and appears at least ten years older than she really is. Her pulse is 108 and irregular. She has anæmic heart murmur (*i.e.*, a false sound of the heart due to poor blood). Her circulation is feeble; the extremities being cool. She has an eruption on her face due to syphilis. She complains of numbness in right arm and leg; examination shows ex cited reflexes and slight loss of power on that side. She complains of pain in her right side (abdomen), but much less than formerly. She states that she sleeps fairly well, and has an average appetite. While there is a very apparent indifference and lack of interest and she is without anxiety regarding her fate, little or no emotion, and no attempt to excuse or justify her acts, she is nevertheless rational, coherent, of good perception and rather remarkably good memory. She is free from illusions, hallucinations, and delusions so far as a searching and thorough examination could determine. She makes no attempt to simulate insanity; on the contrary, she does not want the plea of insanity entered, and did not inform me when asked that she had a sister in-

[1] By Matthew D. Field, M.D., of New York.

sane, though she knew that her sister was or had been at the asylum on Blackwell's Island.

My conclusions are that she is now capable of comprehending the nature of the crime of which she stands indicted, and of aiding her counsel in the formation of a defence, if she has one, as far as her natural intelligence would permit under ordinary circumstances.

Second report—probable mental condition on March 21st, 1888. To arrive at any satisfactory conclusion as to her mental state at the time when this deed was committed, it is necessary to carefully :

1. Review her life, both before and after marriage.
2. Her family history.
3. Her physical condition.
4. The circumstances leading up to the deed.
5. The deed itself. The manner of its execution. The time of day.
6. Her conduct after the deed.
7. The analogy and similarity of this deed with acts of the insane.
8. Were there rational motives for the commission of this deed ?
9. Finally, was this deed the probable outcome of a diseased body and mind ?

1. *She was born in Germany* some thirty-six years ago, and received a fair education, and in religion was brought up to attend the German Reformed Church, but for years has neglected all church duties. She came to America in 1871, and was employed as a domestic up to the time of her marriage on the 28th of November, 1877, when she married a man over twice her own age, and whose daughters were as old as herself. Her husband lost his money, and then started a saloon and became a drunkard. Her relations with his children were always unpleasant. By this husband she had two children and two miscarriages, and was again pregnant on the 23d of June, 1883, when he deserted her, leaving her nothing in the saloon but bills and notices of dispossession. She struggled to keep the saloon and pay off the debts and make a living for herself and her children. She sought to find her husband, but his children and other relatives deceived her as to his whereabouts, and gave her no aid. On September 1st, 1883, she was compelled to abandon the saloon, and was with her two children and pregnant again upon the streets, without money, friends, or home. On the 7th of September she applied to the Superintendent of the Out-door Poor, Department of Public Charities and Corrections, and the Society for the Prevention of Cruelty to Children for aid, and on the following day her two children were committed to the care of the society. Her sister became insane and was taken to Bellevue Hospital, and on September 11th, 1883, was pronounced insane, and on September 13th, 1883, she was sent to the Lunatic Asylum on Blackwell's Island. Mrs. Lebkuchner herself now fell ill, and on September 12th, 1883, was admitted to Ward 11, Charity Hospital, where she was treated for syphilis. Christopher was born March 21st, 1884. The

above dates and facts have been verified by me from inspection of records.

Her husband died October 8th, 1888. For some time she lived with another man off and on, but was never married to him. He was also a drunkard, and contributed little or nothing to her support. By this man she had a child, born in February, 1887. This child was placed in some institution. In the summer of 1887 she found herself again pregnant, and during the late fall or early winter she injured her right side while carrying a stove. Such was her life up to the winter of 1887 and 1888.

2. *Family history (heredity).* Maternal grandmother was insane. Mother died of consumption. Father was an intemperate man. Sister Annie now an inmate of the City Asylum, where she was committed in September, 1883 (I gave one of the certificates upon which she was committed).

3. *Her physical condition was bad.* She is still in a very poor physical condition, and from those who saw her before and soon after the 21st of March, and from her own statements, she was at that time in very much worse physical condition than now. The matron and others about the Tombs tell me that she was much depressed and confused when first received, and that there has been marked improvement since her child was born.

She was and still is suffering from syphilis manifested by an eruption upon her face, and syphilitic disease of the brain is strongly suggested by the numbness, excited reflexes, and loss of power on the right ride, and slight irregularity and inactivity of the left pupil. She was approaching the end of pregnancy, her poor physique was being taxed to nourish this coming and developing child, had the morbid feelings of women at such times, aggravated by lack of food, hard work, harassed and crippled by pain in her side, and believing that she would not survive her confinement, and that she would be confined on the 29th of March.

4. *The circumstances leading up to the deed.* We must not, in considering this part of the inquiry, lose sight of her physical condition as just cited. She was living in rooms for which she paid $8 a month; was paying for a sewing-machine by instalments of $3 per month. Anthony was at the asylum, but in February she was notified to take him home or he would be sent to the West. Christopher was being boarded at twenty-five cents a day. Charlie was sent to a day nursery when she went out to work, and for this she paid ten cents, and it cost her ten cents a day for car fares in taking him up and bringing him home, and then she allowed five cents for his supper, and this made twenty-five cents a day for Charlie. This made her monthly expenses (30 da; twenty-six dollars ($26). This is $1 for every week day, and not a cent was allowed for light, fuel, or food. When she went out to work she received her food. This problem was always with her, and

she says at night she could not sleep, thinking of what would become of them if it rained on the morrow and she could not work, for she could never make up for a day that was lost, and the expenses were all she could possibly earn, even if she could work every day. When the pain in her side got worse and she was unable to work, then she could not sleep. The officers of the society came to the house to make inquiries about her, and she got the idea that she was followed by detectives (this statement is verified by Mrs. Vermilyea, of No. 696 Greenwich Street, where she was employed pretty regularly for some two years, and where she worked on Tuesday, March 20th). In February, when she was notified to take Anthony from the Juvenile Asylum, she was much depressed, and the idea of this crime first came to her, but she fought it off and things were better, and she could work more regularly. Anthony was sent home. She could not have him go West, because she had the idea that the West was a terrible place, and that there he would suffer worse than death. It was in describing what she thought the West to be that she displayed the only emotion shown during my interviews with her. On the 12th of March the "blizzard" came, and that week she could work little and was compelled to buy food and fuel, and everything was very expensive that week. She was compelled to spend the money she had been saving to pay the rent and the instalment on the sewing-machine. She had promised to pay the rent on March 21st, and the woman called for the sewing-machine money early on Wednesday morning (March 21st). The Friday before the crime she was sick and unable to work, and late in the afternoon she fell asleep on the sofa in her room and slept soundly, and when she awoke she found Anthony and Charlie looking at her and crying. When she asked them what was the matter they said they thought she was dead. This made a great impression upon her, and she began to think what would become of them if she should die, and she believed she was surely going to die when the baby was born, for she had never suffered such pain before as she was suffering from her side. Now the idea of killing the children and herself again came to her, and she told the little girl who came for the money for Christopher's board to bring him home to her the next night. She wanted all the children together that they might die together. Saturday she was better and she was able to work, and on Sunday she took home some work and received a dollar and a half. She was brightened now and the idea left her. On Monday she could not work, but Tuesday she went to work and took little Christopher with her, but she suffered severe pain in her side, and in the afternoon was compelled to stop work. She took a car home, but on the way was very sick with great pain, and she had some discharge that soiled her clothes (says her petticoat would show this now if it could be recovered from her effects left at her rooms), and she believed that she would soon be confined. In this state she reached home; but she could not sleep that

night; she "cried and prayed all night," and "she felt that it was best that she should kill the children and herself than that she should die and leave the children behind." This idea took possession of her, and she sent Anthony out for a box of "Rough on Rats." While he was gone the woman called to collect the sewing-machine money.

5. *The deed itself.* This was done in the morning, after a sleepless and troubled night. It was calmly and quietly done. She put all the poison in a pot of tea and made four portions, one for each of the children and one for herself. She did not take her own portion, because she might die first, and she was not cowardly enough to leave them to suffer without somebody to look after them. She gave them the tea containing the poison and told them to drink it, but she could not look at them, but turned away and became faint and sustained herself by holding on to the mantel.

6. *Her conduct after the poisoning.* She remained with and cared for them as best she could. She would have gone for help, but she could not leave them, but stayed and looked at them. Two died and she put them in the bed. On Saturday morning, 3:30, little Christopher fell asleep and then when he was quiet, and would not miss her, she ran to the police station and told them what she had done and asked them to send a doctor. She did not seek a doctor to save his life, she seems not to have thought of this, but to relieve his sufferings. She was calm, gave herself up, made no excuse, and showed no remorse. She still believed that little Christopher could not recover, and that she would still die. She had not looked upon this as a crime, but thought that they would soon all be together in a better world.

7. *The analogy and similarity of this deed with acts of the insane.* It does not appear that this deed was the result of a defined insane delusion, or was the result of a defined hallucination. By this I mean that she was not impelled by any fixed and governing false idea, nor by any commanding voice, or any vision pointing out to her what she should do. She did not appear to have had what is called an imperative conception, that is, any sudden irresistible impulse taking such possession of her as to overpower all will and reason. She does not appear to have been unconscious at the time of the commitment of this deed, nor is there any evidence that she ever had epilepsy, the existence of which might account for the crime. Nevertheless, this deed, contrary to every natural instinct of a human being, much worse, a mother, without selfish motive, apparently the only selfish motive that might be attributed would be that, at any cost, these children should be kept from the relatives of her late husband. Had she wished to have freed herself from the care in order to abandon herself to a dissolute life, as is claimed, she might have left her children with the society without committing this crime. It is evident that she intended to take her own life, but was unwilling to do this until she was assured that all the children were dead. Suicides and homicides of the

insane are committed more frequently in the morning hours, especially after a sleepless and troubled night, and before the will and reason have fully asserted themselves. Insanity involves the *ego*, the insane delusions and hallucinations always pertain to and involve the *ego*, and that which is closest to the *ego;* and this is nowhere more conclusively shown than in the homicidal acts of the insane. Statistics show that thirty suicides are perpetrated by the insane to every homicide, and of the homicides committed by the insane those of the nearest and dearest relatives are eight times as frequent as of those not joined to them by these close ties. There was no attempt at concealment or self-protection; no effort to escape; but, on the contrary, she voluntarily gives herself up and confesses, in the calmest manner, all that she had done. There was also lack of all emotion and remorse.

8. *Were there rational motives for the commission of this deed?* Only that they would be better off dead than left unprotected in this world, when it was plain to her that she was too sick and poor to care for the children longer herself, and that she was going to die.

There was no motive of gain, anger, or revenge. In fact, there was nothing about the deed that was not irrational.

9. *Was this deed the probable outcome of diseased body and mind?* Yes. We find strong hereditary predisposition. We have syphilis, with symptoms of involvement of the brain.

We have pregnancy, with its morbid fears. I have said that there was no defined delusion, but there was great mental depression, with the ill-defined delusions that she would die during her confinement. Her distorted ideas of the West, and what her children would suffer there. She saw no hope in the future, and want and starvation at hand for herself and her children. She was in very poor physical condition and not fit to work, yet working. She was suffering from a severe injury to her side while carrying a heavy stove. She was troubled in every way, and was sleepless, and was in too poor a physical condition to appreciate the nature of her acts or to resist the impulse that impelled her to the commission of this act.

The act seems to have been the result of heredity, pregnancy, circumstances, a diseased and worn-out body, a mind weakened by these, and harassed by poverty and want, and so deeply depressed that the judgment and will were unable to act with anything like their accustomed power and force.

The third report was in the form of a certificate of insanity, the body of which read as follows:

"She is in very poor physical condition. She is thin, pale, and has an anæmic heart murmur, with a rapid, quick pulse. Her pupils are unequal, and there is loss of power and excited reflexes on the right side. She has an eruption upon her face, probably due to syphilis. She is at times depressed, and at other times is elated without adequate cause. She does not appreciate the gravity of her present position, nor

the enormity of her crimes. She has displayed both suicidal and homicidal impulses. On one occasion she poisoned three children, two of whom died. Considering this history, with her present physical and mental states, I believe her an unsafe person to be at large."

This case presents many points of especial interest to both the medical and legal professions. She was at first put on trial before Judge Martine and a jury as to her present sanity and capacity to plead to the indictment. The prosecution called Dr. Allen McLane Hamilton and Dr. George B. Fowler. Dr. Frank H. Ingram and myself were called by the counsel for the accused. The testimony was practically the same, and the jury found her sane.

A month later she was placed on trial before Judge Gildersleeve and a jury upon the indictment; insanity was interposed as the defence; the prosecution was conducted by Assistant District Attorney Macdonna, the prisoner being defended by Mr. John R. Heinzelman. The defence placed upon the stand, upon the question of insanity, Dr. Stuart Douglas, Dr. Allen McLane Hamilton, Dr. Frank H. Ingram and myself; no expert witnesses were called by the people. His Honor Judge Gildersleeve charged the jury. After reviewing the evidence and defining the degrees of murder and manslaughter, he charged upon the question of responsibility as follows:

"If you are satisfied, therefore, gentlemen, that she administered this poison and it resulted in the death of Charles Lebkuchner, and that she did it from a deliberate and premeditated design to effect his death and you are so satisfied beyond any fair and reasonable doubt, then she is guilty of the crime of murder in the first degree, unless you are satisfied that the defence which she has set up here has been established, viz., that of insanity.

"The 20th section of the Penal Code provides as follows: 'An act done by a person who is an idiot, imbecile, lunatic or insane, is not a crime.' It is claimed that the act of this defendant which it is charged resulted in the death of the deceased, is not a crime because she was insane at the time. Now that is a question of fact for you to decide in the light of all the evidence—her conduct, what she said and did, in the light of what the experts who have been called here have said in respect to that question. The rule of law that is controlling on the question of insanity seems to be clearly expressed in the opinion of Judge Andrews of the Court of Appeals in the case of Flanagan against the People, a portion of which was read to you by the learned District Attorney: 'It must be regarded as the settled law of this State that the test of responsibility for criminal acts where unsoundness of mind is interposed as a defence, is the capacity of the defendant to distinguish between right and wrong at the time of and with respect to the act which is the subject of inquiry.' The physicians when asked their opinion as to the condition of the defendant's mind at the time of the

commission of the act based upon the circumstances and condition of things disclosed by the evidence, such as her conduct, her previous history, all the circumstance under which the act was committed, their answer, you remember, was that it was their opinion that she was insane. Dr. Douglas was asked: 'Might she have known the differences between right and wrong and yet not have capacity to act upon that?' The answer was: 'Yes.' Dr. Hamilton said: 'I think her will was affected, that she committed this under a condition of diseased responsibility, she was irresponsible as the result of disease. *Q.* Do you believe that a person in the condition she was, was able to choose between the right and wrong? *A.* I do not. *Q.* You have heard the circumstances detailed under which it is claimed that this defendant poisoned her children? *A.* Yes, sir. *Q.* You have heard what her condition in life was at that time; without my stopping, therefore, to repeat all these conditions and all these details, bearing them in mind, what is your opinion now, at the time she administered the poison, was she sane or insane? *A.* I believe her to be insane, sir, and from my conversation with her.' This answer, viz.: 'I think her will was affected, that she committed this under a condition of diseased responsibility, she was irresponsible as the result of disease:' and then this question: 'Do you believe that a person in the condition she was, was able to choose between the right and the wrong?' and the answer: 'I do not'—brings up the real turning-point in this case. You must find from the evidence, before she is entitled to be acquitted on the ground of insanity, that she had not the capacity to distinguish between right and wrong in respect to that particular act. If you find in the abstract that her mind was sufficiently sound to enable her to distinguish between right and wrong, she would not necessarily be responsible. You may find that she had sufficient control of her intellect and of her faculties to be able to know and understand that it was wrong to kill, that it was a crime to take life, and yet that would not fasten the responsibility of taking the life of the deceased upon her under the law. Was her mind sufficiently sound, did she have sufficient control of her judgment to be able to distinguish right from wrong in respect to this particular act, viz., the taking of the life of her own child under those particular circumstances? If her mind was so affected by reason of the poverty that had pursued her, by reason of the misfortunes that had befallen her and followed her along from month to month and from year to year, if the sufferings she saw ahead of her or in store for her children in case of her death, or that she believed she saw in store for them, if this so affected her mind, so disturbed and deranged her judgment, so interrupted the ordinary and sensible course of reasoning as to honestly induce her to believe that she was doing a kind and merciful act, that she was taking this son from a world of trouble to a haven of peace and happiness, and that it was right for her to do it, although she knew and believed that

murder in the abstract was wrong and a crime—if, induced by this condition of things she was brought around to that condition of mind and was not able by reason of that condition of things to distinguish right from wrong in respect to that particular act, then she is entitled to an acquittal. The rule is the capacity of the defendant to distinguish between right and wrong at the time of and with respect to the act which is the subject of inquiry. The principle, or more properly the theory upon which she is entitled to an acquittal, if you believe that condition of things which I have named existed, must be distinguished from an uncontrollable impulse, because the courts have held that where it appears that a person takes the life of another under an uncontrollable impulse by reason of the pressure or influence they feel brought to bear upon them, having sufficient capacity to know that the act was wrong, being of sufficiently sound mind to distinguish right from wrong in respect to that particular act, although they have not the will power to resist this impulse, this insane force that is operating upon them, nevertheless, the law holds them responsible. The law does not recognize a form of insanity in which the capacity of knowing right from wrong exists without the power of choosing between them, says one case. Another case says, it is no defence that in consequence of an uncontrollable impulse the prisoner has no power over his will. In a case where the accused have said: 'I felt a command from God to do this act; I knew it was wrong; I did not want to do it, but I had not the will power to resist what I believed was the command.' Now, under these rulings in these cases, a person taking life under those circumstances would be held responsible for his acts. So that all this reasoning, you will see, gentlemen, brings you right around back to this principle, what was the particular condition of mind of the defendant at the time of the commission of the act? Was the defendant's mind so unsound that she was not capable of distinguishing between right and wrong in respect to the act which she was committing? This defence of insanity is an affirmative one. The burden is on the accused of establishing it; the burden is upon the accused of satisfying the jury that the defendant's mind was unsound at the time of the commission of the act. It is hardly proper for me to say to you that they are bound to go as far as the people are bound to go in making out a case, viz., to satisfy you beyond any fair and reasonable doubt, and yet the evidence must be convincing and satisfactory to the jury."

The jury retired, and after about two hours forwarded to the judge the two following questions: .

"In case we find the defendant knew the difference between right and wrong, but had not the will power to resist the impulse to commit the crime, must we consider the law, as read by the District Attorney, binding, that is, take no regard as to her will power?" "Did the Court charge that in the case we found the defendant merely acted under an uncontrollable impulse, we should find her guilty?"

At this time I understood the jury stood nine "not guilty," and three "guilty;" the ground of difference being embraced in the two questions presented to the Court. The jury were again called into court and were addressed by Judge Gildersleeve as follows:

"Gentlemen of the jury:—In answer to these two questions which you have submitted, I doubt if I can do better than have the stenographer read to you what I said, and yet I will add to what I have said by reading from some authorities from which I did not read at the time of delivering the charge. The question presented for your consideration is a very delicate one, and so the principles of law that control cases of insanity are not very well settled. They differ in different States. I am bound to give you the law as it maintains in this State, where this court has jurisdiction. It is not an easy matter to determine just where responsibility ceases and irresponsibility begins in respect to particular acts, and I am not surprised that you ask for some further instruction. Now, the law does not recognize any moral power compelling a man to do what he knows to be wrong; that is substantially what I meant to say in reference to the operation of the alleged uncontrollable impulse. That convenient form of insanity which enables a person who does not choose to bridle his passions, to allow them to get and keep the upper hand just long enough to commit an act of violence and then subside, is not recognized by the law. The insanity which takes away the criminal quality of the act must be such as amounts to mental disease and prevents the accused from knowing the nature and quality of the act he was doing. The doctrine that a criminal act can be excused upon the notion of an irresistible impulse to commit it where the offender has the ability to discover his legal and moral duty in respect to it, has no place in the law. To establish defence on the ground of insanity—I now read an opinion of the Court of Appeals—it must be clearly proven that at the time of committing the act, the subject of the indictment, the party accused, was laboring under such a defect of reasoning, of diseased mind, as not to know the nature and quality of the act he was doing, and if he did not know it, that he did not know that he was doing wrong. Where insanity is interposed as a defenee to an indietment for an alleged crime, the inquiry is always brought down to the single question of capacity to distinguish between right and wrong at the time the act was done; and, I might add, in respect to that particular act, it must be regarded as the settled law of this State that the test of responsibility for criminal acts where unsoundness of mind is interposed as a defence is the capacity of the defendant to distinguish between right and wrong at the time of and with respect to the act which is the subject of the inquiry. That is the law of this State with reference to this defence, and it is the law by which you will be governed in determining the question whether the defence that has been interposed here has been established or not. Now, as to the

burden of proof. Crimes can only be committed by human beings who are in a condition to be responsible for their acts; and upon this general proposition the prosecutor holds the affirmative and the burden of proof is upon him. Sanity being the normal and usual condition of mankind, the law presuming every individual is in that state, hence a prosecutor may rest upon that presumption without other proof. The fact is deemed to be proved *prima facie*, and whoever denies this or interposes a defence based upon its untruth must prove it; the burden of overthrowing the presumption of sanity and of showing insanity is upon the person who alleges it; and if evidence is given tending to show insanity, then the question is presented to the court and jury whether the crime, if committed, was committed by a person responsible for his acts, and upon this question the presumption of sanity and the evidence are all to be considered, and the prosecutor holds the affirmative. If a reasonable doubt exists as to whether the prisoner is sane or not, he is entitled to the benefit of the doubt and to an acquittal. Now, I declined, you remember, to instruct you that the defence were bound to establish the insanity of the accused beyond any fair and reasonable doubt. The benefit of a fair and reasonable doubt upon the whole case, upon all the evidence for the people, and for the defence is always the property of any prisoner charged with crime. Now you will see that if the defendant was required to satisfy you beyond any fair and reasonable doubt of her insanity and succeeded in satisfying you from the evidence that there was some doubt of her sanity, and if I charged you the proposition of law that you are bound to find beyond any fair and reasonable doubt, although she did go far enough to create some doubt, she would not have the benefit of the general principle of law that the accused is always entitled to the benefit of any fair and reasonable doubt upon the whole case—that would be requiring the defendant to go further than the law requires. Now I will not go over what I said to you in the first instance. I instruct you according to my own recollections of the law, not with the accuracy and precision with which the law is laid down in these authorities from which I have now read. These authorities which I have read to you embody, as I believe, the principles of law which I intended to lay before you in my charge. I have emphasized the principles by reading these authorities and perhaps have made clear to you the questions of doubt that were in your minds. If any of you have any question that you would like to ask, any point upon which you are not entirely clear, I will endeavor to it make clear. There can be no conviction unless an accused person has sufficient mind, has sufficient control over his reasoning faculties as to be able to form a criminal intent. Bishop, one of the leading authorities on criminal law, I think defines the question in about these words, and that is the test the jury is to apply, Was the mind of the accused, although diseased, sufficiently sound to be able to form a criminal intent? It all

comes back to this original statement which I said to you was the law of this State. The test of responsibility for criminal acts where unsoundness of mind is interposed as a defence, is the capacity of the defendant to distinguish between right and wrong at the time of, and with respect to, the act which is the subject of inquiry. Now in determining that question you see you must take into consideration the defendant's condition of pregnancy, and all her troubles, and all that happened before, and her conduct subsequently, as I instructed you, for the purpose of determining that particular question. You may now retire, gentlemen."

The jury rendered a verdict of not guilty, on the ground of insanity at the time of the commission of the offence.

Subsequently, Judge Gildersleeve committed Mrs. Lebkuchner to the State Hospital for the Insane, at Poughkeepsie, upon certificates of insanity furnished by Dr. Ingram and myself. Mr. Heinzelman procured a writ of habeas corpus, returnable before Justice Beach of the Supreme Court, to show cause why she should not be discharged. Justice Beach discharged Mrs. Lebkuchner upon the ground that the commitment was unauthorized, illegal, and void.

Again, the misery may be so great that instead of the *usual passive state* of these patients there may be almost a *maniacal state* resembling acute mania, in which the patient feels impelled to do something to escape from the depression, and, knowing no cause for it on his own part, may *ascribe his condition to some enemy or to a conspiracy* against him. These impulses to suicide or homicide are frequently recognized by the patient himself, so that self-commitments are more common in this disease than in any other form of insanity. As Cullen says, however, crimes are rare in melancholia. There are special forms of melancholia either dependent on the nature and duration of the seizure or on some special character of the delusions accompanying it.

Simple melancholia, by which we mean mental depression without delusions, is usually subacute or chronic. We find it most frequently among the overworked, or in persons subject to great strain or mental worry, especially of a domestic or financial character. There is a marked tendency to suicide, a constant fear that they will commit it. There is often a hypochondriacal element in these cases, the patients having an intense desire to explain their whole mental state. There is often a fear that the natural affection for their children, husband, wife, or family is absent. This condition is especially common

in women, occurring in the young and unmarried, when perhaps an unfortunate love affair may be the provocative cause. We observe it also at the menopause.

As Savage has observed, the attempts at suicide are often not serious, resembling those in hysteria.

The following cases illustrate the effect of over-strain in a patient with a predisposition to mental disease from hereditary taint, and also the influence of mental disease in one patient on another:

Two sisters, æt. 36 and 38 respectively, were brought to the hospital with the history of having attempted suicide.

Family history was as follows: The mother, still living, had been confined in a hospital for some years for melancholia with suicidal

Fig. 12.—Shows melancholia occurring within a few months of each other in two sisters. Both markedly depressed, and possessed of the delusion that some one wished kill them. They were both single and lived together, being seamstresses by occupation.

tendencies, and was at the time in a state of dementia. The father had also been in an asylum for several months, but had recovered to the extent that he was able to return to his work, although somewhat weak-minded.

Both sisters were very hard-working, conscientious women, and had tried successfully to support the family. They were of highly nervous, hysterical temperaments and had both previously been confined in an asylum for several months, for melancholia with suicidal tendencies.

The present attack, in the first sister, was due to anxiety and want of sleep, incurred in watching over the other sister during a severe attack of nervous prostration. She attempted to throw herself out of the window, and on being prevented became violent. The second sister,

who was recovering from her illness, then became maniacal and attempted to take poison. There was the same idea present in both, that her illness was preventing the other from working and supporting the aged parents. There was considerable mental confusion and extreme depression, without delusions of any kind (see Fig. 12).

These periods of depression are usually most marked during the menstrual periods, or following sexual excess, especially masturbation, which is not uncommon in both sexes in these cases.

The following case of simple melancholia without delusion illustrates these conditions:

A. B., female, æt. 27, family history negative. Five or six years previously, after a disappointment in love, had nervous prostration; following which she became filled with a constant desire to kill herself; however, was always anxious to have some one with her. These attacks would occur every spring. The patient became anæmie, depressed, and lost flesh, and suffered from amenorrhœa and dysmenorrhœa. Any report of a case of suicide in the papers would increase this feeling, and she felt that she must read the full details. She made several futile attempts to take her life: in one she tied a handkerchief around her throat, and was found in a practically unconscious state; at another time she swallowed the sulphur from some matches which she had made into a solution. In none of her various attempts was the intent truly serious. She was always ready after the attack to take any remedy which might relieve her.

This patient was an unusually intelligent person, of many accomplishments. She described herself as never free from this feeling, whether apparently enjoying herself at some place of amusement or alone in her room.

This condition is quite distinct from *acute melancholia with delusions*, into which, however, it not infrequently passes, and which may be *active* or *passive*. In both these latter states there is a profound depression; in the first, however, there is an inability to keep quiet, a constant desire to escape from themselves or from the hallucinations of hearing and sight. The second form seems to be often a stage on the way to *melancholia with stupor* or *melancholia attonita*. It is in these latter cases, as we have already stated, that delusions fixed in character are at the base of all their actions. *Cataleptic states* are not uncommon in which the muscles become rigid and remain fixed in certain positions for a long period. Even

here, however, there is usually consciousness of what is going on around. Patients in this condition will frequently accept food, when given, without opposition. *All these forms of melancholia* may be regarded, however, as simply phases of the same condition.

Chronic melancholia may result from either acute or ubacute states; there is usually some more or less fixed delusions remaining, but it differs from the fixed or systematized delusion found in paranoia. There is no attempt to understand it or explain it, nor any logical process of reasoning concerning it. The legal relations are often difficult in those forms unassociated with stupor. It is often difficult to find either a motive or the presence of a delusion to explain some of the acts committed.

FIG. 13.—Melancholia. S. R., male, æt. 25, tailor; maternal uncle insane; habits temperate; admitted to the hospital December, 1892. Patient would sit in one position all day and refused to answer any question. Had no hallucinations or delusions at any time. Was discharged improved.

Many of the acts are sudden and unexpected, but, as Casper has stated, careful investigation will often reveal delusions. This difficulty is increased by the fact that at times delusions are often concealed.

Letters of the patient, in which the whole mental trouble has been defined, are frequently of great importance.

There is usually a premonitory state, which, however, has passed unobserved, giving the act the character of suddenness or impulsiveness. Casper relates the case of one Taylor, who had always had the reputation of being a loving father and had

never been suspected of being insane by his friends. Having reverses, he killed his four children "to save them from becoming a public charge." He made a confession without any attempt at a defence of his act. Examination showed that his grandmother and sister had been insane; the latter (having a delusion of being pregnant by the Holy Ghost) had also murdered her children.

The absence of all motive for the act, or repentance or remorse, or attempts at concealment or escape, is strong evidence, in a legal sense, of absence of responsibility.

FIG. 14.—Melancholia. A. B., female, æt. 24, duration of disease five years. On admission to the hospital in August, 1893, was melancholic, with the delusion of being followed, and also that she had been poisoned; hallucinations of hearing. Patient has become demented and childish, but has not lost her delusions.

P. Max Simon[1] says that *impulsive acts* are especially frequent in those *melancholics* who shut themselves up within themselves, remaining oblivious to all their surroundings. It is true that very often there has been a long struggle between the impulse and the will, and that the suddenness of the act is only the final victory of the impulse over the will, in a long but silent battle.

He relates the case of a melancholic who had apparently recovered, who suddenly struck his wife with a heavy stone which he had carefully concealed, killing her instantly. He was filled with remorse but said that for a week past he had felt the desire to kill some one, which finally overcame all his powers of resistance.

[1] "Crimes et Délets dans la Folie."

This goes far to prove that these acts are truly morbid impulses and if the defence of insanity is pleaded they should only be put forward as symptoms of a definite psychosis.

In this State a criminal act cannot be excused upon the theory of irresistible impulse, where the offender knew what he was doing and had the ability to discover his legal and moral duty in respect to it. Again the mere presence of a delusion is not sufficient to establish irresponsibility, as the decision in the following case shows:

Appeal from judgment[1] of the Court of Oyer and Terminer of Cayuga County, entered upon a verdict rendered January 12th, 1893, convicting defendant of the crime of murder in the first degree.

William G. Taylor, the defendant, upon a conviction for burglary was sentenced to Dannemora prison for a term of three years, which expired in the summer of 1888, he having received the usual commutation for good behavior. Very soon after his discharge, and in the same year, he was returned to the prison to serve out two sentences for burglary, aggregating about eleven years. From the time of his readmission his conduct was exemplary with a single exception, when, on April 28th, 1890, without provocation or warning, he assaulted his keeper with a hatchet and felled him to the floor. The prison physician stated melancholia (with sucidal and homicidal impulses). On September 29th, 1890, he was transferred to the asylum for insane criminals at Auburn. On September 20th, 1891, he was, as "not insane," returned to the prison. The medical superintendent of the asylum stated that during this period he was sane, while his assistant was of the opinion that during all the time there was doubt as to his sanity. From the readmission his record was good. He had friendly relations with Salomon Johnson, the deceased, a fellow-convict, but in the month of April he exhibited, without any apparent cause, a feeling of great hostility to him, and during the summer he frequently threatened to kill him. On September 19th, 1892, he effected a reconciliation with the deceased, and the next afternoon he lured him into a shed under the shop, upon the pretense that he had some contraband articles to show him, and there killed him with a knife which he had concealed upon his person. Without any emotion he confessed his deed, stating that he had to do one of three things: either starve to death, or kill the deceased, or kill himself, and he did it in order "to be electrocuted." Until his trial, on January 10th, 1893, he was subject to medical examination. Three physicians stated melancholia (with homicidal, respectively homicidal and suicidal delu-

[1] Reports of cases decided in the Court of Appeals of the State of New York (by H. E. Sickels). Albany. People *v.* Taylor (vol. 138, p. 398), decided June 6th, 1893.

sions), five physicians declared him to be sane. The jury found him guilty. He was sentenced to death.

Maynard, J., said:

Proof on the trial of an indictment for murder that there existed in the mind of the defendant an insane delusion with reference to the conduct and attitude of the deceased will not excuse the homicide, unless the delusion was of such a character that if it had been true it would have rendered the act excusable or justifiable.

Accordingly *held*, that proof upon trial of such an indictment of the existence of a delusion in the mind of the defendant that the deceased was acting as a spy upon the defendant and had betrayed a plan of escape, did not affect the criminal nature of the act.

Under the provision of the Penal Code (§ 21) proof of partial or incipient insanity is not sufficient to require an acquittal, if there was still the ability to distinguish between right and wrong.

Mania is a condition of exaltation which affects the emotions and the intellect, and expresses itself by increased activity —mental and physical.

There are two forms to be considered, one in which there is mere excitement and the other in which this has passed on to frenzy. It is the reversal of the picture of melancholia; there is a rapid succession of ideas, and never a fixed idea.

The feeling of well-being and power is as well-defined in mania as the sense of a depression, which it is impossible to explain or throw off, is in melancholia. We have to do, however, with an entity in both instances distinct from the depression or exaltation which may accompany other well-recognized forms of mental disease.

Mania rarely commences suddenly, it is usually preceded for some time by feelings of depression or irritability, with indifference to the usual interests of daily life.

This depression soon changes to one of exaltation with a resistless impulse to activity in all directions, without, however, persistence in any one thing. The attempt to restrain the patient provokes opposition, he feels satisfied only when permitted to talk and act as he pleases. Esquirol defines mania as "a chronic affection of the brain, ordinarily without fever, characterized by the perturbation and exaltation of the sensibility, the intelligence, and will."

Hallucinations, illusions, and delusions are usually present, the patient seems to have lost all restraint over his

thoughts and actions. He appears to be in relation with another world, entirely apart from his environment. He holds conversations with various imaginary persons. His delusions may take the form of grandeur, in which he thinks he is the greatest athlete or pugilist in the world, or that he possesses great wealth, or again, that he is the ruler of the universe.

If the feelings go in the direction of sexual desire, there may be evidence of marked eroticism, and the speech may be obscene. This is frequently seen in those whose whole education has been directly the reverse.

Combined with this, delusions of a religious character are often present, direct commands from God are received, and a change in the personality may take place.

There is often the appearance of being under the special influence of some delusion, as in the position assumed of listening to some voice, or seeing something invisible to others (see Fig. 15). The special senses are especially acute, and general sensibility, as shown by the irritation caused by the clothing and the desire to remove anything that might cause restriction of the movements. The intellect seems at times peculiarly active, attention is fixed for the time intently on the object before it, and the memory of details is sometimes remarkable. There is, however, a real loss or decrease of mental power. The judgment is weakened, as no idea remains long enough in the consciousness to become fixed. The most notable symptom is loss of control, with great emotional excitement.

The physical condition seems to be an index of the mental. There is in the early stages an appearance of vigor, the appetite may be excessive, and a tendency to the use of alcoholic stimulants may precipitate the attack, while not being an etiological factor.

Many such cases bear a close resemblance to alcoholic mania, when on investigation it has been shown that the mental disturbance preceded the drinking.

There is always, however, finally a failure of nutrition with loss of flesh, the tongue becomes coated and the bowels are constipated. The pulse may be somewhat rapid, but frequently, even during great excitement, there is little change, it often being slow and small. Insomnia is a marked symptom, days passing without sleep despite the ceaseless activity.

There is one peculiarity about this constant activity, in that there seems to be no sense of fatigue accompanying it. There is, in fact, apparently a cerebral anæsthesia. This applies also to pain perception, as exposure to cold does not seem to be recognized, and even painful operations can be carried on without apparent suffering. Acts of self-mutilation, which are especially common where sexual disturbance is associated with the mania, are often done, which are harrowing in the extreme and yet are not appreciated by the patient.

In one case under observation the attempt was made to cut off the testicles; the patient in describing the act had no realization that it was painful. The absorbing idea at the time precluded any other perceptions entering into his consciousness.

The special forms are acute and chronic. In the former we may have actual frenzy, corresponding to the so-called raving madness. In such cases there is complete mental confusion, all knowledge of time and place is lost, no attention is given to what is going on around, one delusion follows after another, the patient being in a state of muttering delirium. Such conditions are common in acute fevers, but the presence of a high temperature differentiates them. There is great exhaustion, probably due largely to the loss of sleep (see Fig. 15).

Fig. 15.—Mania, Acute. There is evidence here of considerable excitement, and an hallucination of hearing, as shown by the attitude of apparent listening.

In chronic mania there is generally present some more or less fixed delusion, as the result of the previous delusional state. The patient may consider himself a king or a great general. There is never, however, any attempt to prove the truth of this belief; it is satisfactory to him to make the assertion. There is no incongruence in the fact that he is in an asylum or dressed poorly. These patients are very excitable at times; it is purely

an emotional state, however, which is easily aroused by some trivial irritation and usually as quickly subsides; there is apt to be a quick response by a blow or a torrent of abuse. (See Fig. 16.)

Fig. 16.—Chronic Mania.—Hallucinations of Sight. Female, æt. 24, married, addicted to alcohol and morphine; has delusions of being followed by strange people who wish to kill her. Is passing into stage of dementia.

These patients are great letter-writers, the product being a confused, incoherent mass of material, every passing thought being recorded. There may be a tendency to write rhymes. There is almost always associated with this condition a generally happy-go-lucky state of mind. There is in fact more or less *dementia*, the state toward which all cases tend which do not end in recovery.

The following poem and letter taken from hundreds written by the same patient show very clearly the mental condition referred to:

Lines on The Wreck of the British Man-of-war "The Serpent"—On the Coast of Spain on Nov. 12th, 1890—A.D.

O Spain of Royal fame;
What occured on the main.
Or Has the serpent and all his fangs;
Left the ocean on thy land he sprang
Or is thy monarch in his bibbs so short
Thy shores invaded for war or extort—
Thy infantile sway both night and day
To thy Savour ever, ever pray
To be saved from such a fate
As befall the serpant of late

Her Britanic majesty a monarch pure
Would not envy thee in thy craddle sure—
For in the days eer mans estate
O'Donnell Ruled thy dominion to date—
Thy Royal Mother Queen Christina
To Queen Victoria sends a line—
With greetings from Her monarch son.
Hail Queen Victoria my day will come
When in kingly state I'll not write on slate
But in languarge thy mariner I'll berate—
Thy sailors Joyous, marines, and Jackets Blue—
In Neptunes embrace all are strew.
In numbers a hundred and seventy three
All are prisoners, and three are free—
God in His power that rules the weeve
Defend the defenseless, and bless the brave
Many are the weeping eyes on english Shores
Bereft of fathers laid in their Watery gore—
Lunatic Asylum Wards Island
U. S. America 16th Nov 1890, A.D.
Count The O'Haughey X O. P.
Lord and Poet to
Queen Victoria—By Pope Leo XIII.
Alfonso XIII. The *O'Haughey XIIII.*

Ward's Island, State and City of New York, and U. S. of America—
January 16 1891, An. Dom.

I am The O'Haughey to P. D. D. M. D. M. America, late Sergeant and Hereditary chief of the Royal Irish Constabulary Ireland 36238 a Knight of the Garter and Commander of the Bath and Hereditary Knight of St. Patrick Erin. Under all these circumstance I want Prince Thomas to bear all these titles each and every one them legally and constitutionally. I now put them in a row, so that they may not be confounded by the illiterate or inexperienced—or not know how to fix these titles or show the respect due to the wearer— :

O. P. D. D. M. D. F. L. R. C. Q. C. V. C. S. L. B. A. &c., &c.—Sergeant at law and attorney General—and K. C. B. and Knight of St Patrick and Hereditary Prince of the Universe by the Roman Pontiff—and by the special direction of the Blessed Virgin—and now I am The O'Haughey chief of R. I. C.

"Are you there Moriarty."

We have excluded from our description of *mania* a condition called *delirium grave*, or delirious mania, as it represents an entirely different disease both in its clinical and pathological

aspects. In our classification it is placed under the head of organic insanities with definite pathological changes. Clinically also it is distinct, generally running an acute course with a high temperature of 103–105°, and, as a rule, ending fatally from exhaustion in five or six days (see Fig. 17).

We also do not include here the *special manias*, associated with *epilepsy*, *alcohol*, the *menstrual periods*, etc., as their description belongs more properly to those special diseases.

Criminal acts are rarely committed in mania; the general

Fig. 17.—Chronic Mania. T. O. H., æt. 30, single, no hereditary history; admitted to hospital October, 1890. Had delusions that he was married spiritually to the queen of Heaven. Says that she appears to him and speaks to him by signs, never in words. Says also that he is the Poet Laureate of England, and a count by Pope Leo XIII., etc., etc. Patient frequently asks whether any telegram has come from his royal highness for him. This case presents all the characteristics of chronic mania, *e.g.*, the loquaciousness and tendency to letter-writing and to poetry; his condition has remained practically unchanged for five years. There is an expression of self-satisfaction in his face, dependent upon the absolute belief in his claims to royalty.

disturbance of the intellect renders it impossible to carry out or form any plans. During the paroxysm of delirium to which the patient is sometimes exposed, there may be as a consequence acts of violence and destruction committed. In such cases the knowledge of the facts is sufficient for the appreciation of their character.

STUPOROUS INSANITY OR PRIMARY DEMENTIA.

It consists in an almost complete loss of all mental action.

There may be hallucinations and delusion of sight and hearing. The patient appears to be under the influence of some overmastering spell. No notice is taken of the surroundings; there is no appreciation of the wants of nature; hunger or cold is not felt. One position may be taken and maintained for hours. A cataleptic state is not uncommon.

While the attitude seems to be that of despair or melancholia to a certain degree, it represents more fully a condition of absolute loss of all mental action. New perceptions certainly do not take place, and no thought goes on. However, at times, from the movement of the lips and the muttering, old memories are apparently revived. Rarely is there any recollection of them after recovery.

The physical state corresponds to the mental, the temperature is lowered, the pulse is feeble, the skin dry and cold, the pupils are dilated, loss of flesh is constant. It is essentially a condition of asthenia. The causes of this disease are those of an exhausting character, as loss of blood from any cause as during childbirth or shock consequent to an operation or injury. Fevers of an exhausting nature with high temperature may result in it. Mental anxiety and worry may cause it. I have observed a number of cases among immigrants to this country. Finding themselves among new surroundings, without friends or means of support, confused by the strangeness of the customs, or perhaps by a strange language, they sink into a condition of almost complete dementia. The onset appears sudden, although as a rule the cause has been at work for a long period. Masturbation in a person weakened by various other causes or of a neurotic disposition may be the exciting cause.

Heredity otherwise does not seem to be a direct agency in its production.

Direct injury causing concussion of the brain may result in a traumatic psychosis, sometimes called traumatic hysteroneurasthenia. There seems to be an interference with the functional activity of the brain, an inability to think or act, a feeling of great fatigue on attempting to do anything. There may be great stupor with loss of personality.

The prognosis in these cases is usually favorable. Of late years many such instances have been brought before the courts, the question of simulation or exaggeration of the symptoms being a difficult one to settle.

In the criminal procedure these cases do not often appear, but are more frequent where the question of civil responsibility arises. Shock from fright, some sudden and unexpected loss, has been known to cause complete dementia accompanied by stupor. The condition may continue for weeks or months, or may even pass into secondary dementia.

Secondary dementia is the form which generally presents itself to us. It is the final result in all cases of insanity which do not progress toward recovery (see Fig. 18).

In the various forms which we have so far considered it is not unusual, about forty per cent passing on to this state.

Fig. 18.—Secondary Dementia following Mania. R. F., æt. 53, female, widow; duration of disease 15 years. On admission was inclined to be ugly and obstinate, and had delusions of wealth and self-importance. Present condition, dementia; quiet and rarely speaks.

Complete dementia would imply an absence of all thought, and while this is not the rule, we notice a decided loss of mental power. There is usually a substratum of the delusions which have been present in the acute conditions, which have become more or less fixed and permanent. The melancholic still possesses the feeling of being a great sinner. He may still be constant in prayer, although hopeless of pardon. An egotism, which centres everything around his own personality, is al-

ways observed. With the gradual, or at times rapid, dementia, the identity becomes lost, the idea of time and place becomes confused, the relations of his previous life become vague and indistinct to his memory; he speaks of his children or wife as if he were relating some instance concerning a stranger.

Fig. 19.—Secondary Dementia following Acute Melancholia. E. M., female, æt. 40; duration of disease 12 years. On admission was depressed, remaining in one position, indifferent to her surroundings. At times is violent and has delusions of being the daughter of Queen Elizabeth.

The *maniacal patient* continues with his hallucinations and delusions, which are always of an expansive character. He speaks of being a rich man, or a great general, or God himself, with a certain pleasure, evident in his expression that he is able to talk and think so rapidly. All idea of time and place is likewise sooner or later lost. *Responsibility is absent*, reckless disregard of consequences is evident; the language is often profane and obscene. The actions are restless and apparently unceasing, but aimless. All acts are impulsive; it is impossible to think of motive or premeditation in the true sense. Affection or regard for family or friends is lost, and the ordinary observances in manners are forgotten. These patients when examined are apt to exaggerate all their vagaries, giving loose rein to their actions and thoughts.

Unless there is complete dementia, the character of the existing delusions defines the nature of the preceding disease (see Fig. 19).

While these cases may remain for years under observation,

and while there may be changes in their mental power, they have still in the main the same class of delusions in the end as in the beginning.

It is so in cases which relapse after recovery. The new seizure is frequently but a repetition of the previous hallucinations or delusions. We do not find on our records that the patient has been admitted at one time as melancholic, at another as maniacal.

The condition known as alternate or circular insanity is an exception to these remarks. The peculiar fixed and permanent delusions which may manifest themselves in a changed personality, as in the belief of being a general or king, may be shown by the attempt at decoration with medals or ribbons. While claiming to be such great personages they feel no incongruity in their existing surroundings. There is no desire or attempt to explain or logically to support their delusion, as seen in the following case.

A. B., æt. 62, became melancholic and possessed with the delusion of persecution, fearing that he was to be shot. He applied to the police for protection and was sent to the asylum. His dementia progressed rapidly; he was unable to state where he was or where he had formerly lived. He later had a delusion that his friends, to compensate him for his suffering and persecution, had raised $100,000,000 for him, and that it was subject to his draft at any time. He could not be reasoned out of this belief. His plans of using the money were in consonance with his previous religious delusions of self-condemnation, as he intended to give it to the churches.

Such delusions differ entirely from the systematized delusions observed in the class of monomaniacs or paranoia. In these there is always a logical train of reasoning ever ready for the defence of their opinion. The emotional states are rarely so marked. Excitement may indeed be extreme if there is opposition to the carrying out of the plans—otherwise not. The same may be said in regard to depression: this is rarely so extreme as to manifest itself by marked melancholia with complete loss of all interest in external matters. There may be indeed suicidal intent, but then again it is the result of a process of reasoning never present in melancholia or in the dementia following it, with permanent delusions of a depressive character. There is almost invariably the history of hereditary or

acquired disease in those with the systematized logical delusions of paranoia. A good example of secondary dementia in melancholia is seen in the following instance:

C. D., merchant, æt. 51, family history negative. Patient has been a very active business man, and has amassed a fortune. He has, however, been addicted to excess in the use of liquor, and in his sexual relation. In the past year he has had severe domestic trouble, which has caused much loss of sleep and anxiety. He resorted to liquor to drown his sorrows. One year and a half ago had a severe attack of delirium tremens, from which he recovered, but has never since been able to carry on his business with the same vigor or efficiency as previously. His judgment became unreliable and his memory defective.

Two months previously, after considerable mental worry and some excess in alcohol, he became depressed and filled with hallucinations, in which he saw a two-headed monster which attempted to kill him; also the porters and servants in the hotel appeared to him as threatening to do him harm. Patient would hold imaginary conversation with them. He became sleepless and refused all food, fearing that he would be poisoned. He interpreted all these terrors as a punishment and consequence of his previous life. He had no religious delusions of any kind. The depression increased, accompanied at times with violence in his attempts to escape from his surroundings. He gradually passed into a state of dementia, which became almost complete, the patient forgetting the day of the week, the place in which he was, or any knowledge of his business affairs. All anxiety disappeared. He would eat anything placed before him; seemed to have entirely lost all idea of the proprieties; would urinate at any time and place, as the desire prompted him.

The question from a legal point of view in this instance arose only as to his capability to enter into a business contract or to make a will. When aroused the force of habit made his conversation and actions apparently rational for a short period of time. Any attempt to state what his property consisted of, and to whom it should go, led to complete mental confusion. It was plain that the requirements of a disposing mind, as in the making of a will, were absent. Here also the question of undue influences would probably arise.

Secondary dementia may be of two varieties, *i.e.*, associated with agitation or with apathy.

The first form is more commonly the result in mania.

Here we find almost ceaseless activity, a marked tendency to destruction of anything which comes into their hands. There is no motive present, but an aimless, objectless activity. Anything attracts their attention for the time, bright colors,

music, etc., but there is never any concentration on it for any length of time. There is no real joy or sorrow. All serious relationship with the outer world is lost. There is usually marked loquaciousness, a constant talking concerning innumerable subjects, a change from moment to moment in the emotional field from pleasure to anger, an almost constant obstinacy to do as they please. Various hallucinations and delusions are present, as evinced by the expression of cunning or slyness or of self-importance shown in the face. Yet with all this activity there is complete loss of any appreciation of their circumstances. There is little feeling or regard for their nearest relations, a visit from whom causes but a transient evidence of pleasure. Their acts are all impulsive.

They are subject to excesses of maniacal excitement, when their mental powers seem to be revived, their delusions becoming more exact, and their acts more purposive. These conditions are simply flashes from the pan, the tendency being toward relapses into more complete states of dementia. A final characteristic symptom is the disappearance of all the former hallucinations and delusions, or at least the absence of any influence on the individual when present. They lead to no act on their part; there is no pressure to carry out any plan as the result of their feelings and thoughts. A *condition of partial dementia* may exist for years without apparently progressing to the final stage, although its terminal stage is sure to follow.

The recognition of this state of dementia is at times difficult when the previous history is unknown. The continued observation, however, of increasing intellectual weakness, decreasing emotional powers, increased loss of appreciation of the ordinary relations of life, and responsibility or care for any of its interests, with neglect of all the ethical and social considerations, indicate without question the final state of complete loss of mental activity, *i.e.*, dementia (Krafft-Ebing).

The description just given applies most truly to mania, but is not infrequently observed in melancholia.

Feelings of mental anxiety, unexplainable even by the patient himself, are apt to recur in the dementia of melancholia; in fact, a recurrence of the early stages is more common in all respects than in mania. We observe, therefore, a restlessness, a ceaseless attempt to escape from the unbearable men-

tal state. This may take the form of violence of a homicidal character, or, again, be suicidal in its nature.

There is *rarely any plan in these acts, the motive is a general one* rather than a specific one, and at no time is there in any sense a conspiracy. *It is rare, indeed, that in insanity there is any combination for carrying out a design, except perhaps in paranoia*, and even in these instances it is rare. The absence of real motive or of the attempt to conceal or escape from the consequences of the act, while not positive evidence in a legal sense of the irresponsibility of the individual, necessarily has great weight in disproving criminality. Doubt can only arise where the dementia is but partial.

The question of the knowledge of right and wrong in regard to the particular act committed is the only practical test which the law can make; the further question whether the person was able to control his acts is of importance only in so far as it can be established by evidence that all knowledge of right and wrong was absent or lost at the time the act was committed.

This does not involve at all the question of moral or impulsive insanity; for in these cases the acts are never impulsive, except in so far as they are random and purposeless, or a general result of the mental confusion induced by some oppressive influences driving the individual to attempt to escape from it, as in melancholia, or as in mania induced by the continuous weakened mental activity of a purposeless nature, which even to the patient himself often appears as an abnormal, unnatural condition. This is seen in the often gradual loss of identity, the life and experience of the past seeming to belong not to themselves but to another individual.

This condition differentiates itself from the *remissions* of either melancholia or mania by the fact that the intelligence in the latter is restored during these so-called lucid intervals, while behind all the evidence of the disturbances of the emotions and the presence of the hallucinations in dementia is seen the defect of the intellect. All attempts at judgment or opinion or reasonable action are impossible. No business can be carried on, no plan formed.

Dementia with apathy is more commonly the result in melancholia than mania. We frequently find at the basis of this profound interference with all mental activity a fixed perma-

nent delusion which controls and dominates the individual, preventing the entrance of any outside or new perceptions into consciousness. *It is as if some cerebral compression was present*, which if removed would permit the mind again to take up its functions. This idea is supported by the fact that in some rare instances, even after years of absolute passivity, during which the patient has apparently been unconscious of passing events, of time or locality, after some sudden shock, as an acute illness, *i.e.*, pneumonia, or again without any apparent cause there is a return of the mental powers. In many such cases there is a more or less complete knowledge of the past events.

There is this to be noted, that the depression, the condition of mental or psychical pain, is no longer of such an acute character. There is that condition previously referred to, as if all the events through which they pass were occurring to a third person. There is here also often the tendency for a stay in the progress of the dementia. However, the final stage is the same in all, interrupted as it may be by seizures of acute depression and anxiety—complete abolition of mind results if life is prolonged. *The physical appearance corresponds to the mental.* The vegetative processes are impaired. With the absence of active mental processes there is frequently a tendency to obesity, the face appears vacuous, differing from the characteristic expression of worry, with the lines of care on the forehead so generally present in the agitated form. There seems to be complete muscular relaxation; the patient falls into an inert mass; the position is one of flexion; the chin sinks on the chest; the saliva flows unnoticed from the mouth.

As has been said, with "the loss of all mental action they appear as animals after the removal of the brain, and in fact the cortex of the brain has lost its function." They no longer appreciate danger, hunger is absent, requiring the necessity of feeding them, and in fact looking after all their wants. There may be indeed a true amnesic aphasia. Death results from a general defect of bodily nutrition; and intercurrent diseases, as pneumonia, are common.

Hallucinatory mania (Mendel), delusional stupor (Newington), or *hallucinatorischer Wahnsinn* is an acute mental disturbance, the characteristic condition of which is the hallucinations and illusions of all the special senses. As a result there

is a complete loss of identity and of time and place, a mental confusion almost approaching acute dementia.

There are no delusions in the proper sense of the term. It is essentially a disease consequent upon exhaustion. Therefore any cause, as exhausting fevers, inanition, overwork, alcoholic excesses, sexual excesses, the puerperal period, loss of blood, etc., may be the provoking agent. These are all accentuated in those hereditarily affected or of a neuropathic disposition. However, a distinction should be made between this disease and the acute forms of paranoia. Maschka, in my opinion, confounds what he terms *primary paranoia*, a primary psycho-pathological state, with this disease. If we hold fast to the idea, as will be discussed later, that all forms of paranoia are due to degenerative conditions, either inherited or acquired, we can separate without difficulty the two forms of insanity. Acute conditions may arise in paranoia, but when they subside we still have left the original defective mental condition; while in hallucinatory mania, if that is recovered from, the patient returns to his normal mental soundness. It is essentially a disease, therefore, involving the affective or emotional element of the mind, and only secondarily the intellectual. Reason and judgment are for the time absolutely in abeyance, simply because the numberless new and erroneous perceptions do not allow of any proper conception of them to take place, or, again, may crowd out former perceptions. The mental confusion may be increased by the attempt on the part of the patient to reconcile the new and the old perceptions.

The course of the disease may be rapid, lasting but a few weeks or months, and ending in recovery. Other cases pass on to complete dementia.

The division of mental disturbance falling under the head of degeneration is one of the most important which comes to the attention of the jurist and physician.

It is, as we have said, a disease of the brain without well-defined pathological changes, but in which the element of heredity with all its attendant predispositions is the most important factor.

Into this question to-day comes the discussion of many of the social conditions of our generation. The criminal, the anarchist, and socialist, all have their defenders as irresponsi-

bles in relation to the crimes which they may commit. Perhaps no more important psychological considerations in their bearing on legal relations exist in the whole domain of insanity than in this class. It has been said that general paralysis is the distinctive disease which the exigencies of modern life have developed; and while this is true to some extent, it is equally certain that the development of the wealth of the world, to so great a degree by modern scientific discoveries, the possibilities of the individual in sudden acquisition, together with the free discussion of all possible subjects of thought in the religious and philosophical fields, without the usual limits of control formerly allowed to the Church and established schools, have developed an egotism and idea of self-importance which especially manifest themselves in the congenitally defective classes. This would probably have been held in check under strong central control, but the spirit of equality and frequently license thus evoked in the weak, and especially the ignorant, has developed one of the characteristic symptoms of insanity as a whole —that is, concentration on the individual, or egotism. *In our classification we have called this affective insanity*, that is, a form in which the feelings and emotions are chiefly involved. We have to do with the desires, therefore, with the ethical side of human nature, and hence the whole field of the social and moral relations of the individual to his surroundings is in question. The judgment, the reason, is not so much affected abstractly; the mind as a reasoning organ is often but slightly impaired; actually it is so far affected in that the emotional state exerts such a control over the intellect that it no longer is free to use its powers, and as a result we find more or less impairment of the will in all these cases.

The degrees of loss of free-will is the question for the jury to decide; the fact that it is impaired is for the expert to establish.

We find that the etiological factors are especially of an hereditary character. Either in the parents or in collateral branches of the family there were insanity, nervous diseases as epilepsy, chorea, hysteria, etc., or not uncommonly alcoholism, tuberculosis, etc. Again, during early life various deleterious causes may have been active in impairing the nervous system, as rachitis, which may have interfered with the development of the

skull and secondarily the brain; or, again, acute diseases, as meningitis or encephalitis or the various acute exanthematous fevers, as scarlet fever or measles. In such cases we often find evidence in the body of defective organization, as in various asymmetries of the head. The ears may show evidence of irregularity, the eyes be placed too widely apart, the forehead be markedly receding, the palate high. We are now approaching indeed a class of degenerates which belong to the so-called borderland of insanity. There is evidence from the previous history of their departure from the normal type, but often insufficient proof of irresponsibility.

There is no definite pathological condition which we can properly say belongs to it, except perhaps in those cases where we have evidence of injury to the brain structure from inflammatory disease, mal-development, or traumatism. And these instances are largely in the minority, and when excessive carry our case to the class of idiots or imbeciles in which we have predominant ethical defects or primary moral weakness. We can and should in these cases recognize the actual intellectual impairment which prevents the individual from controlling the natural desires common to the brute creation.

Krafft-Ebing has classified the physical and psychical evidence of this diseased condition as follows:

A quick reaction to all influences, whether atmospheric or those of disease; special inclination to various functional disturbances of the nervous system as convulsion, the various neuroses, etc., at the periods of development and decline (dentition, puberty, menstruation, climacteric period).

There may be a very early development of puberty and a mental precocity with slight bodily development. The sensory and motor fields show disturbances by hyperæsthesia, anæsthesia, paralysis of a functional type, spasmodic contractions as chorea, epilepsy, or epileptic seizures. The sexual organs are either functionally abnormally active or the reverse, leading to masturbation and sexual excesses of various kinds.

Similar mental disturbances of a functional character are present. Especially noticeable is the tendency, on slight provocation, to conditions of depression and excitement, which pass beyond the normal expression of pleasure or joy. Physiologically all are subject to emotional states of depression and exalta-

tion. Women at the menstrual periods and during pregnancy or lactation, and males are likewise subject to these periodical changes. At such times there is especially marked and noticed the ability to undertake a great amount of work, at other times there is (in both sexes) a condition almost of stupor and mental torpor. Among this diseased class, however, there seems to be no middle ground. In the exalted period there is a constant ceaseless activity in which often impulses of almost an "imperative" nature are present. The opposite condition of depression is characterized by equally intense mental pain and impulses to suicide, or a great fear of becoming insane. *A special group of this form of disease* is that class where the ethical part of their nature seems absolutely absent. Feelings of pity, right, honor, ordinary courtesy and consideration apparently do not enter into their minds.

The imagination is active, hallucinations are common, and there is especially noticeable the rapidity of their association of ideas. In art and science they may show themselves as inventive, but the mental process is intuitive rather than logical, and is rarely persistently followed out. There is constant pressure, often impulsive, to acts eccentric and bizarre.

Morel has described them as acting by instinct rather than reason.

There is a contradiction in their character—apparently great mental power, even genius, with inability to get along in life; they are the victims of grand schemes constantly formulating themselves without definiteness, and an inability to reproduce them accurately. They represent often our class of reformers, religious and political, and go to make up, as we have said, a large proportion of our leaders in social reform.

The physical bearing, the manner of dressing, the egotism often indicate the mental condition. This mental state may remain unchanged for years; the predisposition, however, on slight provocation to insanity is self-evident. Unfortunate financial condition, family loss, domestic trouble, failure to obtain political preferment, ill health, and excesses, venereal and alcoholic, may be the exciting cause.

Among the first of the various subdivisions of this class of the insane that we shall consider is *reasoning insanity*, or *folie raisonnante.*

It may assume the maniacal form or the melancholic, but more frequently the latter. Their acts imply a controlling interest, forcing them, despite their knowledge of the character of the act and its consequences, and often their fear of committing it, to do it. There is usually an absence of hallucinations or delusions.

Griesinger *defines the depressive form* as *hypochondriacal melancholia*, the French authorities as *folie raisonnante melancolique* (Tuke). In these cases, however, there is a distinct difference from melancholia, either in the acute or in the chronic form. The depression is more of an emotional character, and rarely gives the impression of delusions, which, as we have said, are usually absent. Again, the condition, which is generally constant, so that the patient feels its presence whether at a place of amusement or alone, is not always as intense but occurs paroxysmally or even periodically, as during menstruation. *It differs, again, however, from so-called periodical insanity*, although closely allied to it, especially in its etiological and pathological relations. Both occur in hereditary disease, but the latter has a more typical course either of mania or melancholia, during which the intellectual faculties are affected.

We have thus under this head reasoning mania, reasoning melancholia, reasoning monomania, for it seems proper to include here all those forms of mental disorder characterized by desires, often obscure and impulsive to a certain extent, which manifest themselves in acts often cruel, indecent, or foolish. The individual understands what he is doing and the true relation of the act, in its social and legal aspect. He, however, prefers the consequences to the restless, unhappy state of mind which exists, until he has carried out his desire. This mental state must be recognized as a pathological entity, and belongs to the legal aspect of the question of insanity fully as much as to the medical; in fact more so, as it rarely comes under consideration except in so far as the acts committed offend against the law. It is usually in regard to criminal procedure that we meet it.

"These terms are given to each particular form of insanity: mania, melancholia, monomania, respectively, when still accompanied by reasoning power, though the ordinary mental symptoms are evident" (Tuke).

Moral insanity is simply a division of the form just described. We have to do with mental defect especially characterized by the absence of the ethical side of man's nature. This was the last attribute to man's mental structure which we referred to in describing the process of development of the mind. In these cases, therefore, we find loss of the ordinary feelings of love toward family or mankind in general. Ideas of honor, truth, sacrifice or regard for others are absent. Desire is the only motive for all their acts; when therefore unrestrained by fear of punishment or by some power greater than their own, there is no limit to the cruelty or evil of their acts. This is not infrequently seen in the great tyrants of history, as Commodus and Nero, types of degeneratives so common during the degenerative periods of Roman history and which illustrate this point. Our criminal classes belong to this same order.

Investigation has shown that the hereditary taint has been carried down for generations with the same tendency to crime as other forms of mental disease. There is, indeed, intellectual defect, although not necessarily manifested in the ordinary processes of thought. It is observed rather in the lack of idea of consequence, the apparent disregard for those things which are by most men held as valuable, *i.e.*, respect, position, even wealth, if as its accompaniment any restrictions are added. This form of insanity is not infrequently associated with sexual excesses in which there may be perversion, the pain inflicted being the means of producing venereal excitement.

Definition of Moral Insanity.—A disorder which affects the feelings and affections, or what are termed the moral powers, in contradistinction to those of the understanding or intellect (Pritchard). The diagnosis depends largely on the previous history of the individual. The fact that one from several children under the same moral teaching and restraint has always shown a tendency to be obstinate and unruly, has been beyond control, and has developed tendencies to excesses of all kinds, often indeed of a petty nature, as thieving, drunkenness, etc., is strong evidence of congenital defect.

There is always some difficulty in distinguishing such cases from those which merely represent depravity, and in which punishment and discipline are salutary. This is illustrated again and again in our reformatories. The former class

are incapable of being reached by any influence; training, education, religion making no change in them. They show no appreciation of kindness or regret for their acts, which they may be cunning and skilful in concealing or planning.

The depraved, from lack of proper surroundings and education, will usually benefit by these systems. Delusions are usually absent, but I have observed in a number of cases delusions of persecution; nor is it to be forgotten that the so-called psychoses, as melancholia and mania, may affect these defective persons, running their usual course, leaving them perhaps more demented but with the same tendencies as before. The condition is essentially an incurable one. Its degree is the only point of interest as affecting the question of responsibility. The following case illustrates it very well:

A. B., æt. 26, male; parents healthy; one brother very musical, interested in nothing else; very nervous; one sister very similar in her disposition and also very musical. The patient was always unruly, would play with the roughs of the neighborhood and frequented saloons; was never a good scholar, but was good at figures and could keep accounts well. At the age of 17 was arrested for maliciously robbing a groeery shop. There was never at any time any need of his stealing, as he had a good home. Was sent to a reformatory, where he remained for some time, and showed the same disregard for discipline and was constantly guilty of misehievous acts. He was then transferred to the asylum at Auburn for insane criminals. On his release he resumed his former habits of living, associating with criminals and drinking to exeess. He passed some months in an insane asylum again. He now has delusions of perseeution; hears voiees ealling him opprobrious names. Is unable to eseape from this mental state and at times beeomes violent in his effort to free himself from his supposed oppressors.

Impulsive Insanity.—Under this head we are dealing with similar mental states as those previously described. The mental condition is not difficult to recognize as the act defines it. The question of civil and criminal responsibility is not so easy. We are on the borderland of sanity. Here again careful investigation will usually show that hereditary influences are of the greatest importance in aiding us in the diagnosis.

In all forms of insanity, especially, however, where we have exaltation or excitement, there is a tendency toward impulsive acts; even in melancholia this is observed. This is, however, due to the loss of control, induced by the generally impaired

intellectual state. There is, however, in impulsive insanity an irresistible impulse to the act, a feeling that the act must be carried out in order to satisfy some unexplained motive within the individual, and which no fear of consequences can prevent his carrying out. This is illustrated by the case of a school teacher to whom reference has already been made.

A. B., æt. 45, early in life, at the age of puberty, showed signs of sexual perversion, in that he yielded to an impulse to expose his genital organs to young girls. The consequences of this act were fully appreciated by him, he was ashamed of it immediately. He had always shown great aptitude in his studies, graduated from a university in Germany, and had good opportunities for advancement in life, from his social position and friends. Again guilty of a like offence against society, he escaped to England, where his acknowledged ability as a teacher soon procured him a good position.

After procuring, however, a comfortable position, the anxiety for his livelihood being relieved, the same impulse seized him, and despite his knowledge of the necessary results to follow and the disappointment to those friends who had aided him, he was again guilty of a similar offence. Coming to this country, he was again successful in securing occupation, and gained the respect of all with whom he came in contact, who never suspected him of his mental disorder. After becoming thoroughly established in his position, and, as he said, all strain and anxiety being removed, the same impulse presented itself. He strove by all means possible to overcome it. Ordinary sexual intercourse gave him no relief, nor was the same pleasure experienced. He was guilty again of exposing himself in a public place to little girls.

The patient, when I saw him soon after the committal of another offence, was perfectly cognizant of the extent of his crime against order, bewailed his condition, and threatened suicide. He presented the appearance of an educated, refined gentleman, and yet said that if he knew he was to have been killed the next moment he could not have prevented himself from committing the act.

Here we have the full reasoning power of the individual intact, a full knowledge of the consequences understood, and the necessary precautions of escape taken. The only element absent for constituting the act that of a responsible being is the motive. In this last every motive for not doing it, existed. Desire alone, and that certainly a morbid one, is the only explanation of the act.

While in a medical sense this is a sufficiently explanatory reason for ascribing the case to the field of disease, in the eye of the law we cannot recommend for the best good of the community that such persons should be held as irresponsible. They

do not belong to the borderland cases of insanity. The condition is purely a pathological one, still punishment should be meted out to them in order to conserve the best interests of society, where the few must suffer for the good of the many. Physicians should take this view of the matter and thus aid the law in coming to some modified ruling in regard to punishment for such crimes against decency and order.

"In the normal condition every sensation tends to translate itself into an action, but this tendency is restrained by the ego which intervenes, perceives the sensation, analyzes it, and finally decides for or against the accomplishment of the act. The equilibrium between the tendency to the act and the restraining power of the ego (determinism) constitutes the normal condition in this point of view. The impulse results from a rupture of this equilibrium.

"The equilibrium being lost, either by weakness of the ego or by both together, it follows that the impulse may be the consequence of one or other of these conditions, hence it occurs in those forms of alienation in which it is observed. Practically it is especially in the emotional neurasthenic, the degenerative conditions, imbecility, dementia (enfeeblement of the ego), acute mania, hallucinatory insanities, and, finally, in epilepsy (mixed state), that we meet with impulsions.

"*Impulsions may be divided* into *besetting impulsions* (obsessions) and *reflex impulses* (impulsions properly so-called), according as they act with or without resistance on the part of the individual. *They may also be divided into intellectual, emotional, or motor impulses, according to the sphere affected.*

"Motor impulsions, which are those generally referred to in the clinic when we speak of impulsions, are further designated by the morbid acts to which they give rise. Thus we speak of impulsion to theft (kleptomania), to incendiarism (pyromania), to drink (dipsomania), to murder, suicide, etc. At one time there was a tendency to consider each form of impulsion as an insanity, a special monomania; nowadays that is completely abandoned, and it is generally admitted that morbid impulse is only a symptomatic element of insanity that may occur under different characters in widely different conditions."
—E. Régis, "Practical Manual of Mental Medicine."

I have quoted this author at large, as he truly represents the present status of opinion in regard to all those forms of mental disturbance which formerly were classified as distinct forms of insanity. They are, as shown in our classification, simply symptoms of an insane state, coming under the head of the degenerative type, in which the emotional, rather than the intellectual, field is involved. The law can only recognize them in so far as they correspond to the generally accepted rulings in regard to civil and criminal responsibility. The practice of the courts in England and in this country, following the trial of McNaughton in 1843, has been that every man is presumed to be sane and to possess a sufficient degree of reason to be responsible for his acts, unless it can be clearly proved that at the time of committing the act the accused was laboring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or if he did know it, that he did not know that he was doing wrong.

Under these rules, which may be taken as outlining the law on this subject in a large number of the United States, the defence of irresistible impulse to do what is known to be morally wrong and what is legally a crime cannot be set up; for if the accused was conscious that the act was one which he ought not to do, and if that act was at the same time contrary to the law of the land, it is punishable.

This denial of the right of a person who knows the wrongfulness of an act to set up as a defence that he was under an insane and irresistible impulse to do it, has given rise to bitter denunciation of the law by medical writers who are practically agreed that such a condition of the mind may, and not infrequently does, exist, and who maintain that a person in such a condition is as helpless to refrain from his act and as irresponsible for it as is a person who commits a crime under irresistible physical compulsion. Acting upon the assumed truth of this proposition, the courts of Scotland and those of a number of the United States have recognized this as a defence in criminal actions.[1]

All forms of crime may be committed under the influence of irresistible impulse—homicide, suicide, arson, theft, and various acts indicative of sexual perversion.

[1] F. S. Allen, "Insanity before the Law." Johnson's "Universal Cyclopædia," vol. iv. New York, 1894.

We may have also melancholia or mania associated with this condition, and more rarely delusions and hallucinations. It is, however, not in these latter conditions that we should consider this disease as an entity. In fact, the only safe course is to follow the dictum of the law in this respect, which virtually says that irresistible impulse is no defence unless a symptom of insanity.[1] In the case of Flanagan *v.* People,[2] Mark Flanagan was indicted for murder in the first degree, for killing his wife. The defence was insanity. Judge Andrews says:

"We are asked in this case to introduce a new element into the rule of criminal responsibility in cases of alleged insanity, and to hold that the power of choosing right from wrong is as essential to legal responsibility as the capacity of distinguishing between them, and that the absence of the former is consistent with the presence of the latter.

"The argument proceeds upon the theory that there is a form of insanity in which the faculties are so disordered and deranged that a man, though he perceives the moral quality of his acts, is unable to control them, and is urged by some mysterious pressure to the commission of acts, the consequences of which he anticipates but cannot avoid.

"Whatever medical or scientific authority there may be for this view, it has not been accepted by courts of law."

In the case of People *v.* Walworth[3] the same point of issue came up before Judge Davis.

The defendant, Frank H. Walworth, was indicted June 9th, 1873, in the court of Oyer and Terminer for the killing of his father.

The evidence showed that the father had been estranged from the defendant as well as all his family for some years. The defendant in an altercation shot his father, but asserted that he had no intention of killing him. Judge Davis gave the following opinion:

"If it be satisfactorily shown that the accused at the time of committing the act had not the capacity to understand what he was doing and know the consequences of his act, and know that it was wrong, then he is excused. But if he had capacity suf-

[1] People *v.* Coleman (I., p. 1), Oyer and Terminer N. Y. County, Dec., 1881. Davis, J.

[2] Reports of cases decided in the Court of Appeals of the State of New York (vol. 52, p. 469).

[3] New York Criminal Reports, vol. iv., p. 355.

ficient to know the legal and moral character of the act he was doing, the fact that he alleges that he had not the control of his will in respect to it, but that his will was controlled by irresistible impulses, is no defence."

The jury found the prisoner guilty of murder in the second degree.

Simon defines *an irresistible impulse as consisting of an imperative necessity which the patient cannot overcome and which leads him to commit some act, as homicide, suicide, arson, or theft.*

There may be physical signs of this condition at the time of the act, as marked headache, flushing of the face, palpitation of the heart, etc. All these symptoms often disappear when the desire is yielded to. There may have been a long and protracted struggle to overcome this impulse. Often, indeed, the patient may confess his fear of doing some violent act. The writer reports the following case: A lady who had married a widower with one child by his first wife had always shown great affection for the child. One day she was surprised in the act of choking the child. She had shown some time previous to this, signs of depression and preoccupation. Later she had similar attacks of violence, both suicidal and homicidal. She ultimately completely recovered. This author places the victim of irresistible impulse especially among cases of mania, melancholia, hysteria, alcoholism, and epilepsy. These conditions are, however, different from the form under consideration, in which the impulse stands out as the principal and often the only symptom of insanity. I would make an exception in epilepsy, for in this disease we find very frequently this condition; in fact, on investigation we may find that we are dealing with epileptic insanity, as shown in the following case reported by Simon: A young quarryman had set fire to thirteen quarries, barns, and buildings. The multiplicity of the crimes, the identity of the circumstances attending their accomplishment, and the doubt of the existence of a motive led the authorities to ask for an examination of the mental condition of the accused by Tardieu and Laségue. They declared the accused impulsive and irresponsible and recommended his commitment to an asylum. An epileptic seizure soon after explained unmistakably the cause and nature of his impulses.

Homicidal impulse, homicidal mania, or monomania are terms which have long been employed, so that they appear to represent distinct forms of insanity.

The subject has, however, been pretty well threshed out in the past century. Such writers as Pinel, Esquirol, Clouston, and Bevan Lewis, while not agreeing in all particulars, have established, that we have to do with a symptom which not only belongs essentially to the degenerative form of insanity, especially of the hereditary type, but also to the acquired form.

We have indeed in all forms of insanity tendencies to impulsive acts either homicidal or suicidal, as in mania, melancholia, alcoholism, general paresis, etc.; but these are not considered under this heading. In this class the cardinal symptom is a strong, at times irresistible, impulse to homicide. This may be struggled against and at last yielded to, as in the instance of impulses referred to previously in other relations. There is to be observed here also the feeling of satisfaction after the completion of the act. The condition is often preceded by physical excitement resembling the aura in epilepsy. In fact, among epileptics we find during the interparoxysmal periods tendencies to impulsive acts.

These cases are unattended by hallucinations or delusions and must be separated from this class, no motive being present. The manner in which the act is carried out does not indicate a motive, even though great care in all details is observed and careful plans of escape from the consequences are laid. It is not infrequent that the individual will calmly deliver himself up to the authorities, confessing without emotion the act committed. Again there may be great remorse for the act. Such acts differ from those due to the fixed ideas of melancholiacs who commit homicide, as in these cases the motive, while a false one, based often on delusion, is apparent.

Definition of Homicidal Insanity.—A fair statement of this character of impulse is given by Tuke "as a syndrome directly connected with hereditary moral degeneration, and essentially characterized by the desire to murder, without any intellectual disorder or passion, and necessarily requiring as concomitant mental conditions persistence of consciousness, anxious struggle against the besetting impulse, and lastly, in case the act is committed, subsequent moral depression."

The existence of such a condition cannot be denied; the physician is often the confidant of such fears of his patient. A woman, of bad hereditary tendency, would come to me and cry and bemoan the feeling which possessed her, that she would kill her husband and her child. This idea was always with her, but would come on especially at times almost paroxysmally, during which periods her face would become flushed and she experienced a general feeling of congestion.

This element of mental disease should be acknowledged by our courts, although it necessarily requires great care in its acceptance when set up as a defence for criminal acts. Clouston records a letter of a patient of his, which explains well this complete possession of the person by a fixed idea:

"My Dear Sir:—According to promise, I have written to the best of my ability what I feel mentally. God alone knows my feelings. They are truly awful to know. I lived in continual fear of doing harm each day. I had not a moment's peace in this world." (The patient was a physician and continues:) "I was afraid, when applying nitrate of silver to the throat of my patients, that I would push it down. . . . When I sat down at my own table I used to have horrible impulses to cut my children's throats with the carving knife," etc., etc.

Such accounts could be multiplied almost indefinitely in the experience of any alienist. We find no evidence of intellectual defect, the memory and judgment are not impaired except in regard to this fixed idea. As one patient said: "I must be mad, and yet I can do everything as I used to. I can read and talk, and yet I feel as if I was not myself."

Régis sums up the matter very well as follows: "The impulsion to homicide proceeds in an identical manner by intermittent and paroxysmal crises, preceded by melancholic prodromata. The patients are beset with the fixed idea of killing this or that person—for example, a child they adore. The sight of that child, of a weapon, a knife, arouses their obsession and plunges them into inexpressible torment. They realize that their will is bending, that they are yielding to the impulse, and, filled with horror, they lament, flee from home, ask aid and protection of physicians, not hesitating in some cases to have themselves locked up in order to escape from their morbid penchant."

There is little doubt that in many cases suicide is committed

from fear of committing homicide. This dread may be concealed for years from others, and probably the cause of certain mysterious, unexplained suicides can be ascribed to this morbid mental condition.

Suicide and Insanity.—This occurs in various forms of insanity, especially, however, in melancholia. It is, however, not infrequent in mania, epileptic insanity, general paresis, alcoholism, etc. The idea that suicide always indicates insanity is erroneous; that a large number are insane is not to be doubted, but the act alone cannot be accepted as a sign; the motive must always be sought for, and if sufficient cause, as loss of property or fear of disgrace, is discovered, the common plea of temporary insanity under these circumstances cannot scientifically be accepted.

Suicide among the ancients was very common, and it is referred to frequently in the Bible—a general to escape from the ignominy of defeat would frequently kill himself on his own sword. The ancient Greeks did not regard it as a crime, nor was it so considered among the Romans. "Seneca held that suicide was an actual duty under certain circumstances, as in great poverty, slavery, grief, old age, or hopeless disease." The frequency of suicide markedly increases as a nation advances in civilization. This is probably dependent upon the more complicated relations of life and the difficulties of self-support.

Climate, seasons, time of day have their influence: out of 11,822 cases in four years in Prussia, from 1869 to 1872, the greatest number occurred in the night, that is, in the early morning hours. The influence of race, religion, culture, sex, morality, political life, city and country life, age, celibacy, occupation, intemperance, heredity, is of importance.

Suicide may occur in those who have shown no other sign of mental disease. It is frequently threatened in melancholia and in neurotic persons. It may be impulsive or deliberate. The impulsive form may occur among the neurotic, hysterical, maniacal, alcoholic, and epileptic; the deliberate form occurs more frequently among paranoiacs, the chronic insane, and melancholiacs. In children it is almost always in those hereditarily affected (see Tuke, "Psychological Medicine").

Suicidal Impulse.—Suicidal mania so called belongs to the same category of mental diseases as the form just de-

scribed. What has been said in regard to hereditary and acquired degeneration applies equally well here.

Kleptomania.—CLEPTOMANIE (*Fr.*); STEHLSUCHT (*Ger.*)

Definition.—An irresistible impulse to steal (Tuke).

This condition must be classed among the neuroses, and is essentially a characteristic of defective mental development. We must make a sharp distinction between it and the tendency to steal or appropriate anything, whether valuable or not, so commonly observed in the well-defined forms of insanity.

Imbeciles and idiots, without apparent regard or knowledge of consequences, will steal, and may do so more or less cunningly, avoiding detection if possible. They usually take such things as would naturally please them or satisfy their desires, as food or clothing, etc.; these acts generally resemble those of children. They recognize that they are wrong because they have been punished for similar offences, but they have no feeling of moral responsibility in the act.

Again, in chronic melancholia, or especially in chronic mania associated with exaltation of the ego or individual, the appropriation of various articles to ornament the person is very common. There is no special impulse or longing in these cases; there is evident intellectual defect or there may be a delusion back of the act. Again, in the earlier stages of general paresis stealing is not uncommon, and persons have been convicted who have later developed all the typical symptoms of this disease.

Tuke refers to six cases related by Dr. Burman in the *Journal of Mental Science*, January, 1873: "All were convicted of stealing and sent to prison, and in all of them general paralysis became manifest soon afterward." We must make a careful distinction between a symptom of insanity and a condition which stands out alone as a mental characteristic.

The tendency of the past, as shown in the writings of Marc, Marie, Lasègue, to class all these cases as types of insanity with irresistible impulse, has of late taken the opposite direction. It is, however, without doubt a mental state, resembling in kind, but not so intense in degree, the various forms of mental disease already described under the head of homicidal and suicidal mania. We find an absence of the moral sense of wrong committed with the act. The only fear is that of detec-

tion; there is no apparent loss of the moral aspect of other questions; the intellect is unimpaired. There is, however, almost invariably present a neurotic disposition and not infrequently an hereditary taint of insanity.

One lady, long under observation, moving in the best society, and universally respected and liked for her versatility and pleasant manners, has for years been known to take articles of value from the houses of friends whom she has been visiting.

The motive was the desire to have the article which struck her fancy. There was, however, no need to resort to such means of obtaining it, as she could amply afford to purchase it. She at one time said that "she could see no harm in her taking it, her friend would have given it to her had she asked for it." This moral obliquity is not uncommon.

Another lady rarely visits the city in her shopping tours without returning with various articles which she has abstracted from the various store counters. At certain of these places she is simply watched and the various articles charged up against her, which she subsequently pays for. Many of these articles are never used afterward, but simply accumulate. This patient represents more closely the cases of irresistible impulse. In other respects there is no evidence of mental disease. She is an estimable wife and mother. Many similar instances are daily reported in our papers.

The question of responsibility is difficult to settle, and indeed most cases are settled by some arrangement. *The absence of any real motive, the knowledge of previous acts of a similar character, the history of hereditary taint, and a neurotic disposition, seem to establish the proof of a mental weakness which approaches the confines of insanity.* One cannot say that punishment should not be inflicted; for, as in other cases of mental disease, when the emotional side of the mental functions is more involved than the intellectual, the knowledge that punishment will follow such acts has a great deterrent effect; and while as physicians we might claim immunity for such defective individuals, as jurists we can only believe that the best interests of society are subserved by holding the person responsible.

Pyromania.—Monomanie Incendiaire (*Fr.*); Feuerlust, Brandstiftungs-Monomanie (*Ger.*). These terms all indicate the idea of a fixed impulse, a single desire.

Definition.—A morbid impulse to burn (Tuke).

There is less evidence of impulse of a so-called irresistible character in these cases than in those of the class just described, although we have to deal with the same more or less morally and intellectually defective type.

These acts are more frequently committed by the young, about or before the age of puberty. There is often a well-defined history of imperfect mental development, difficulty in acquiring learning, lack of ordinary affection, or the existence of a cruel disposition. It has been noted also in children brought up in institutions, where probably the motive has been revenge for fancied or real wrongs. Again, homesickness has been often the motive.

While frequently there is discoverable some motive, as a feeling of hatred toward persons who have perhaps treated them cruelly, it is more often a supposed injury than a real one; or even love for some one may be the motive, the attempt being made to rid them of their enemies. These latter cases are more often homicidal in character. Again, in cases where homesickness has been the motive of the act, the individual thought thus to escape or be sent back to his home.

The true inconsequence of the acts is perceived in that no element of sorrow is experienced. These acts are similar to special acts of destruction, as breaking windows, destroying clothing, which have been performed by persons of this class. There is often a desire to attract attention, to be explained only by a morbid exaltation of the ego. There is not infrequently great skill and cunning shown in the concealment of these acts, or even shrewd attempts to throw the suspicion on others. This is often successful, as there is no reason to suspect them personally, as the extreme youth of the individual may make it seem impossible that they could have carried out the plan successfully. There often is an hysterical basis in many of these cases, and even in the very young this cannot be excluded. There are, however, cases again where the mere act of incendiarism, the pleasure and satisfaction derived, seems to be the only motive. The same condition is observed here as referred to in moral insanity or impulses toward other acts. There may be a long struggle to resist the impulse, which finally overmasters them, and there is also usually a sense of quiet and satisfaction following its accomplishment. It is not

unlike, as Lewis has stated, the quiet following an epileptic seizure. These patients resemble epileptics indeed in many mental characteristics. Lewis makes this distinction: "In the genuine impulsive forms of insanity consciousness is never so far impaired as to issue in forgetfulness of the details of the homicidal act. When such is the case, when any marked obscuration of memory is apparent, we may presume the impulse to have been of epileptic origin." This applies equally well to all impulses of the so-called imperative type.

We must be careful not to confound the tendency to impulse found in all forms of insanity, especially melancholia and mania, with this form, for frequently similar acts are committed by these patients, but the motive is usually perceived in the hallucination or delusion present.

I would agree with Griesinger in objecting to the term pyromania as defining a distinct form of insanity, but this applies equally well to all this class of impulses. It is simply a symptom, which, however, occurs so often and so uniformly among these defectives that, for convenience' sake, usage has so firmly established the term that we cannot well place it aside. The author just quoted says: "Away, then, with the term pyromania, and let there be a careful investigation in every case into the individual psychological peculiarities which lie at the bottom of and give rise to this impulse. The grand question *in foro* in all such cases must ever be to ascertain whether there existed a state of disease which limited or could have limited the liberty of the individual. Sometimes the feeling of anxiety, hallucinations, states of hysterical exaltation, in other cases the actual existence of a nervous disease (epilepsy or chorea), render probable the assumption that the accused has been subject to some passing mental aberration. We should not forget that usually very little is wanted to interfere with the liberty of action in such persons; they are, for the most part, young, childish, or half-childish, often morally and intellectually weak, silly, and suspicious individuals. The incendiary act often appears to be utterly without any motive, the feeble ego having opposed no resistance to the thought of the deed which suddenly sprang up." Clouston well says that these cases represent "*states of defective inhibition.*" "No doubt the theory of irresistible impulse is liable to abuse, and

to be applied where it does not exist; but one might as well assume that there is no real epilepsy because malingerers and hysterical girls simulate fits."

Coprolalia—an impulse to use obscene or profane language. We not infrequently find in the hysterical and in the early stages of acute insanity and in puerperal insanity the tendency to the use of words which at times it seems impossible that the individual, often refined and educated, could have ever been in a position to have heard or learned. This may manifest itself especially when there is an erotic element present in the disease. Our condition, however, is distinct from this: it stands out as the principal or only symptom of disease. It is usually observed in the young about the period of puberty or earlier, and may result from some fright. It is not infrequently associated with a neurotic predisposition to instability of the nervous system. The child may be very intelligent or the reverse, and often there has been noticed an absence of the usual moral understanding or estimate of things. Even in these patients there is evidence of some hysterical taint in the history. Many such cases are actual forms of mental disease developing later into the type of paranoiacs or showing signs of other impulses.

These exhibitions of obscenity are often paroxysmal or periodical, resembling in many aspects epilepsy, especially when there is convulsive excitement present. The consciousness is never involved, however, and a strong motive, as fear of punishment, may be sufficient at times to end the attack.

A. B., æt. 10, was brought to me by his mother with the following history: Family history negative, except that there was a strong nervous element in both parents. The boy had always been exceedingly bright at school, although not as easily controlled as the other. This the mother ascribed to the fact that he had never been made to obey. Following a severe castigation by his father for some act, he became very much excited, and the following morning went out in front of the house and began to swear in a most excessive way. He was apparently conscious of his acts, but appeared to be in a very excited state. This was repeated every morning and at no other time, and usually after his father had left the house. His sudden return with the threat of punishment was often sufficient to end the attack. At all other times the child's language was very proper. He usually complained of a peculiar feeling in the head just preceding the attack, and

said he knew what he was saying, but could not help it. Under treatment these attacks became less frequent and finally ceased. The bromides were used, as the attack seemed epileptoid in character.

Morphiomania, *or the opium habit*, consists in an excessive desire for morphia. It resembles dipsomania in regard to the irresistible desire for this drug. The will power seems to be absolutely lost, and any subterfuge will be employed to obtain the desired stimulant. In extreme cases no regard for consequences or affection for others has any influence in controlling these persons.

Again, we hold here that in the majority of cases, while the provoking cause may be simply the taking of the drug to relieve pain, its continuance and abuse with periodical excesses depend on a neurotic state which is due to an inherited degenerative nervous organization; in other words, rarely will this habit plant itself upon an otherwise sound organization.

The symptoms manifest themselves in the first place, as seen from the use of the drug in ordinary administration, as a pleasant excitation, an increase of mental action, even to brilliancy, which soon passes, where large amounts are taken, into a condition of apathy and mental stupor, and finally to a toxic condition, as shown by coma from which the patient can only be aroused with difficulty, soon to fall back into his previous state of unconsciousness, associated with slow respirations and slow pulse. The skin is usually moist. There may be more or less tremor, paresis, and ataxia. The walls of the bladder are paralyzed so that there is frequently incontinence, and there is also a paralysis of peristalsis. No special symptoms with reference to the reflexes exist. The secretions in all the organs are decreased; in extreme cases there is also loss of sexual power. The physical condition gives evidence of malnutrition, and finally there may be even emaciation; the hair turns gray, the finger-nails become dry, and the pupils are contracted and at times are unequal. There may be considerable pain of a neuralgic character, which is widely distributed, suggesting a neuritis.

The mental symptoms are those of great loss of energy unless under the direct influence of the drug. A constant habit of procrastination exists. In the true opium habit, one rarely has

the pleasurable imaginations observed in those who are not *habitués;* there is, however, a feeling of self-contentment induced, which takes its place—a calming of the whole nervous system. When the drug cannot be obtained, the patient becomes very tremulous, is subject to profuse sweatings, excessive cardiac action, and a feeling of impending death. There is also insomnia, and the patient may even pass into a maniacal condition, followed by intense exhaustion, and not infrequently by death. (Hallucinations, usually of sight, may be present.) The final results are those of dementia—loss of judgment and of memory, the moral character being lowered. There is a special tendency to lying, and no statements which such patients may make in their attempts to obtain the drug can be relied on. Forgery, neglect of family duties, etc., are not uncommon. Mania is often marked by a delusion of persecution and exaltation, not unlike paranoia; in fact, we may have to do with that disease in these cases.

Lead.—The special effects of lead on the nervous system are largely somatic rather than psychical. We find well-marked lesions affecting principally the peripheral nerves, causing paralyses and wasting of the muscles, especially of the extensor group of the upper extremities. Cord lesions, although more rare, are present, and in an autopsy made by me well-defined lesions involving the gray and white matter were present. This may also involve the cortex cells and association fibres of the brain, resulting in a mental condition in which the more prominent symptoms are those of lowered mental action, loss of memory, headache, and, in some few cases, great excitement of a maniacal type. Hallucinations of sight and of the other senses may be present. Convulsions are not rare. Depression is a not infrequent symptom, and if the patient remains still exposed to the poison, the condition advances to dementia. There is nothing, however, characteristic of the condition as far as any special well-defined form of insanity is concerned.

Dipsomania.—We must make a sharp distinction between the class of drinkers who are given to excess only periodically, and those in whom the habit is continuous. In the former we recognize a mental condition similar to other neuroses, especially to epilepsy. In these cases we find an almost irresistible impulse to satisfy a well-defined craving which can only be satisfied by

the use of alcohol. Under this head, we would refer to excesses in the use of other drugs, such as morphine and cocaine. In the chronic habitual drinker, the excess is more apt to be induced by the physical condition following continual abuse of alcohol, and its consequent exhaustion, resulting in a demand on the part of the system for a stimulant. In both instances, the final result after excessive debauches may be the same, that is, delirium tremens often follows, or a maniacal condition lasting frequently for weeks or even months. In dipsomania, however, the condition of chronic alcoholism or alcoholic dementia does not usually occur. There is more frequently an acute mental disturbance of the type of the degenerative diseases such as epileptic insanity or paranoia; in fact, in this class of patients hereditary taint is marked.

We can only regard dipsomania as a symptom of mental disease, or, in other words, as a sign or evidence. As we have already remarked, it occurs in the class of so-called degeneratives, those affected with an hereditary taint or predisposition to insanity. It belongs to the same type as moral, impulsive, reasoning, and periodical insanity.

In a legal sense it is difficult to accept it or the above as separate forms of insanity and their value in diagnosis is simply as one of a chain of symptoms, indicating mental disease.

It is of importance to establish the existence of the tendency to periodical excesses, as it may prove at least that premeditation in the commission of the act was absent, and also may be ground for a lessened degree of responsibility.

Nymphomania is a state found in the female, the most marked feature being desire to satisfy the sexual appetite by irritation of the clitoris. It is a form of insanity when carried to great excess, in which eroticism is the chief feature. Such individuals rarely obtain pleasure in the natural manner; they have a morbid tendency to self-gratification in this direction. They may derive a morbid pleasure in this direction from objects of art or pictures, in which case the excitation is entirely of a psychical character. We would also place this form of disease among those of the so-called degenerative type, in which heredity and acquired instability are important etiological factors. It may occur at various periods of life, not rarely even at the climacteric. It is found especially among those who lead a solitary

life. It is not confined to the uneducated classes. It is also observed in various forms of mental disease, in which there is a loss of the higher faculties of the mind as in idiocy, epilepsy, and hysteria. We note it also in various conditions in which delusions take a prominent part. It may be a symptom in various spinal diseases. It is at times caused by certain diseased conditions of the genital organs and by inflammatory affections of the uterus.

Mania Transitoria—transitory mania; *die transitorische Tobsucht.*

"We understand by transitory mania that kind of acute frenzy which, developing suddenly and rapidly, soon reaches its climax" (Tuke).

It is usually of short duration, lasting not longer, as a rule, than twelve hours, and passing off in a profound sleep, there being no recollection of the attack or the acts committed. It therefore very much resembles an epileptic seizure; and, in fact, many acts committed in known cases of epilepsy associated with mania, either preceding or following the convulsive seizures, are exactly parallel to those done in these cases.

We must, however, as Tuke says, distinguish it from mania by adopting the term *frenzy*, as its course is so much more sudden in its onset and short in its duration, and leaves little or no trace on the mental state, its integrity being unimpaired. It also has no tendency to return, differing in this respect from epilepsy. It, however, stands out as a distinct condition by itself, and is of special importance in a forensic sense, as the absence of preceding symptoms, or any marked hereditary influence, makes it difficult to establish as a defence in criminal cases, especially if any motive for the act is discoverable. In fact, it is not accepted as a defence in court.

It is difficult to find any definite cause for the condition; great excitement, physical exhaustion and mental worry, grief, insomnia, acute fevers, injuries to the head, no doubt have their influence. Again, very little is known of the morbid changes outside of congestion of the brain, which is an uncertain condition, and is not infrequent in other diseases without producing transitory mania or frenzy. We do not include under this head mania resulting from alcoholic excesses or occurring during the puerperal state.

Clouston believes that most of these cases are epileptic in character, of the nature of the mental epilepsy of Hughlings Jackson, or of the so-called *epilepsie larvée*, or masked epilepsy, of Morel. It is difficult, as has been said, however, to think of a single epileptic seizure occurring without cause, and not being repeated or leaving any of the signs of disease common to this well-known neurosis.

There is complete unconsciousness of the surroundings and of the personality during the attack. The patient is subject to hallucinations of various kinds, both of hearing and sight, and is usually violent and destructive, often homicidal. These cases resemble those of impulsive homicidal mania. Instances are reported of persons waking from sleep, and, probably under the influence of some fixed delusion, showing a homicidal tendency.

Maudsley also rather inclines toward the opinion that the attacks are epileptic in character, as shown from the following remarks quoted from Lewis' work on mental disease, but admits that, "although epilepsy, masked or overt, will, I think, be found to be at the bottom of most cases of mania transitoria, it must be admitted that there are some cases in which there is no evidence of epilepsy in any of its forms to be found; but it may well be doubted whether a distinct insane neurosis is not always present in these cases. With such a constitutional predisposition, a genuine attack of acute insanity, lasting for a few hours only or for a few days, may break out on the occasion of a suitable exciting cause, and during the paroxysm homicidal or other violence may be perpetrated. After child-birth it sometimes happens that a woman is seized with a paroxysm of acute mania of short duration, during which she kills her child without knowing what she is doing. The effect of alcoholic intemperance upon a person strongly predisposed to insanity, or upon one whom a former attack has left predisposed to a second, is sometimes a short but acute mania of violent character, with vivid hallucinations and destructive tendencies; and a like effect may be produced by powerful moral causes, sexual excitement, and other recognized causes of insanity" (Maudsley, "Responsibility and Mental Disease").

Paranoia is a form of insanity which comes especially under the class of degenerative diseases.

It is essentially characterized by a delusion or delusions of

a fixed and systematized character. They are usually indeed of one kind, and the disease has perhaps for this reason been called monomania. This is, however, an unfortunate term, as we find this symptom not infrequently in other forms of insanity, as melancholia, where we always observe decidedly fixed ideas of depression. The term delusional insanity, largely used by the English, is also not to be recommended, as it is not in any way descriptive of this special form. *The main fundamental characteristic of this disease is a delusion which has become a part of the belief of the individual, and which he believes himself able to explain and defend.*

Paranoia is usually a primary disease, that is, congenital in its origin—the predisposition to the disease is born with the individual; the exciting cause may not manifest itself until later in life. "The patients receive its germs at birth, and it develops at its appointed hour under the influence of the slightest cause—for example, poverty, difficulties of social life, disappointments, mortifi ations, conjugal unhappiness, the menopause, etc. That is to say, that the principal cause of partial insanity is heredity. It is well known that it is more frequent in females, celibates, and especially those born out of wedlock" (Régis). The term progressive systematized insanity used by the preceding author explains very well the condition, and he has defined it as follows: "A chronic, essential insanity, without disorder of the general activity, characterized by hallucinations, especially of hearing, by delusious tending to become systematized, and ending in a transformation of the personality."

The intellect is rarely much involved. In all other relations the individual may be able to carry on his business in life with ordinary acumen; where, however, the delusion affects his particular occupation, it will be found running through all its course.

This class of patients has been included, therefore, under the head of the partially insane. There is little doubt that in the general question of right and wrong, they are thoroughly responsible in their understanding of the moral issue and of the consequences of their acts. However, in a particular act, if the result of their delusion, it is not so much a question of their ability to control their actions, as that they do not attempt to do so. Under their delusion, which may in their changed personality appear to be a command from God, whose direc-

agent they may consider themselves, the question of the right or wrong of the act or its consequences is never taken into consideration. This condition differs from the so-called irresistible impulse of the former class which we have been considering, based as it is on a train of reasoning often logical, though wrong and unreasonable in its premises. *We have to do here with a class of the insane perhaps the most dangerous in any community. They have within themselves a law sufficient unto themselves.* With intellects often acute, they are at times patient and skilful in carrying out their plans, whether to regenerate the world or to remove a supposed tyrant. They may conceal their delusions from others, and in fact are usually ready to defend themselves against the accusation of being insane. Many cases indeed are harmless in their tendencies, having simply impracticable schemes, harmful only to their own prospects in life. *The disease is essentially a chronic and incurable one*, and tends slowly to dementia, which is rarely, however, profound.

As one would expect, from what has been said, these cases constantly come into conflict with the law, and perhaps no form of insanity has led to more protracted and heated discussions, or more contradictory statements, by various well-known experts in insanity in regard to their mental soundness and responsibility. The trials of Oxford, Guiteau, and Prendergast are striking examples. There can be no question of the insanity of such cases, and this from the medical standpoint might be considered sufficient ground for relieving them from all responsibility. But in law other questions, of policy, the welfare of the community, etc., have to be especially considered. To permit the idea to go forth, that persons known to be capable of reasoning in a logical manner, and who are cognizant of what is going on as reported in the papers, and yet have long been considered in the vernacular of the times as "cranks," nevertheless will not be held responsible for their acts, would probably lead to a great increase of such crimes.

These individuals are greatly influenced by the fear of the law. In a milder way in our asylums the restrictions, placed on this class of patients when they commit any overt act, restrain them from repeating them. The execution of homicides, when the head of a government has been the victim, cannot be called

a "judicial murder" but a necessary measure for the prevention of similar acts and the protection of the government and the community in general.

There are many physical signs of this form of mental disease. The Italian school has especially developed this subject.

There is frequently found asymmetry of the skull, of the face, irregularities of the jaw or palate, of the nose, ears, and eyes. These are not always present, nor can we say that any precise statement of uniform irregularities has as yet been made. They occupy about the same importance at present in diagnosis as the so-called criminal type of brain does in pathology. Enthusiasts have brought a great mass of statistics together, but have not as yet thoroughly investigated the other side of the question, *i.e.*, the existence of like irregularities among the sane. It is true, generally speaking, that beauty and symmetry are not common to criminals or the degenerative insane (see Fig. 20).

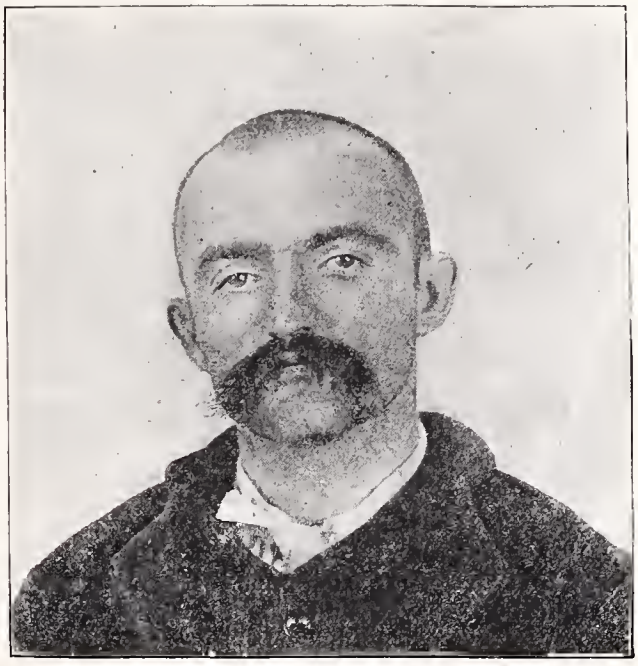

FIG. 20.—Paranoia.

I have spoken of paranoia as essentially a primary disease, not a secondary one. It has led to considerable confusion in our understanding of this disease, that certain fixed delusions, remaining after the acute stage of melancholia or mania, have been ascribed to paranoia. The whole course of these psychoses, and the attending dementia, should sharply mark them out as different in their very nature. The term secondary monomania could be well used in these latter conditions.

The prognosis in paranoia is unfavorable; no cure can be

accomplished. However, the delusion may become less active and the individual become at least harmless. Paranoiacs are usually unable to take their part in life, and frequently become the object of public care or charity.

The subdivisions of the forms of paranoia, were we to go into the various special delusions which exist in these cases, would be very numerous. Classifying them, however, under their principal headings, we would make the following:

The *typical form* is one of exaltation with delusions of grandeur, an increase in the feeling of importance. There may be a change in the personality so that the simple artisan, the ordinary workman or shop girl, feels that royal blood really flows in their veins. Again, they may conceive themselves great generals, or reformers, or specially appointed messengers from God. It is interesting to watch the evolution of their delusions, the gradual transformation into another personality, and to note the slight and trivial occurrences which are all conceived as referring to themselves and adopted as explanations of, and indications pointing inevitably to, the fact that they are what they claim. At first there may be no hallucinations, although almost invariably they appear sooner or later. This is shown in the following case:

A. M., æt. 25, male, single. Duration of disease fourteen years previous to admission to the hospital in 1892. Has the usual egotism of this class. Has the delusion of possessing great wealth (millions), and that the title of Prince von Michael has been conferred on him. Has hallucinations of hearing, one voice being that of Jay Gould, to whom he had written letters asking to be adopted as his son, etc. Is considerably demented.

The estimate which friends may make of such a mental condition is shown in the following letter: "I think A. wants to get a living without work. He thinks he is remarkably smart. I think that after he finds that he can't humbug you with his aspirations he will be perfectly sane." Patient's condition has not changed except that he has delusion of persecution (see Fig. 20).

Instead of a change of the personality there may be simply an exaltation of the existing ego. The artist becomes in his own estimation the greatest of living artists, the accountant the one most expert. It is, however, more frequent for this exaggeration of power and ability to be applied to a sphere in life apart from their ordinary occupation.

This feeling of self-importance may manifest itself in a quiet self-assurance which nothing can shake, and no discouragements alter; or it may show itself in an aggressive form, asserting itself in its attempt to take the part of reformer, whether in the political or theological world. This evolution is one of gradual growth; many things have occurred, perhaps at long intervals, suggesting to them that they are not what they seem. The peculiar feelings they have long had, and the hallucinations or illusions which at first produced only some slight mental confusion, finally, in a manner that appears sudden, manifest themselves in a fixed delusion in regard to their character and personality. Their reasoning now takes on a more or less logical character, which remains the same from year to year. The positiveness and certainty of their convictions lead finally, as they find themselves not believed in by others or unable or prevented from following out their plans, to the stage of persecution, which invariably early or late makes its appearance. The *delusion of persecution* has been defined by French writers as a special form of insanity (Laségue), but it is really simply a stage, as we have said, in this form of systematized delusional insanity.

Fig. 21.—Paranoia; Delusions of Persecution and Grandeur.

L. R. (Fig. 21) entered hospital May, 1874, æt. 51. Duration of disease approximately twenty-five years.

Has delusions of being poisoned by his enemies with lead and copper, and also of being infected with syphilis and phthisis.

Patient has many similar delusions, though his mind is active and his conversation connected.

Has exaggerated ideas of his own importance. Is at work (*i.e.*, 1876) in making a translation of Horace, which he thinks will be of more practical use in classical schools than any other. Says that he is being persecuted as all great men from Galileo down have been. Very slight causes excite his suspicions. The following letter was written on the library being closed for reorganization:

DEAR SIR:—Will you have the kindness to inform me whether, as far as you know, I have been supposed in my projected compilation from Horace to be in any way trenching upon rights of Prof. Chas. Anthon, Jr. (I presume the author of the part I was using) or of Gen. Cessnola (who is said to be writing on Cypress and early Eastern art), or any other elsewhere or here? I cannot see how such a thing can be possible; but if it is not so, let me speak to you as one educated man to another and entreat you will consider how much I must suffer in my feelings—a man as I am who has always been studious, thinking, industrious! at being stopped in my preparation of a treatise, etc., etc., etc.

In 1890 delusion of poisoning continued unchanged. Says is about to write a book and make a new religion which will change the destiny of New York City.

Patient constantly writes letters asking for protection. L. R. is exceedingly well read, and has held the position of professor in some college; his education has been, however, irregular and unsystematic.

The delusion of persecution may be present in various forms of insanity. It is common in alcoholic cases, the hallucinations of hearing and sight being usually of a terrifying character, with the delusion of being followed or hunted down, or of a conspiracy formed against them to kill them. This is seen, again, in melancholia, where not infrequently we also find the fear of being killed or of being followed existing (*Verfolgungswahn*). It is not always of the persecutory character, but is often the result of the various hallucinations and illusions resulting from the sensory disturbances common to this disease.

We observe it not less often in mental diseases accompanying puberty, great fear of being the subject of some conspiracy being very common. In all these instances the whole course of the development of this special delusion is very different from its logical development in paranoia. In the latter form it is either the result of the mental confusion or depression existing, or consequent upon the hallucinations. *It cannot be said that we have any form of insanity where the only existing symptom is that of the delusion of persecution—i.e.*, of being followed from place to place, etc. We will find on careful investigation that there is a reason in the minds of

these patients for the persecution; it does not exist as an entity inexplicable to them. They may explain it on the ground that they have possession of some important invention, of some secret power which perhaps the Government would like to possess; or, again, that they are the real king or governor of the country, which, if the fact were made public, would lead to the overthrow of the impostor who now is in power.

G. B. (Fig. 22), male, æt. 53. Duration of disease twenty-seven years. Patient says that if he had his rights he would be high king of the earth of the Masons, and also that he is Christ, the Son of God, alias G. B., etc.

The character of this delusion is not unlike those seen in chronic mania.

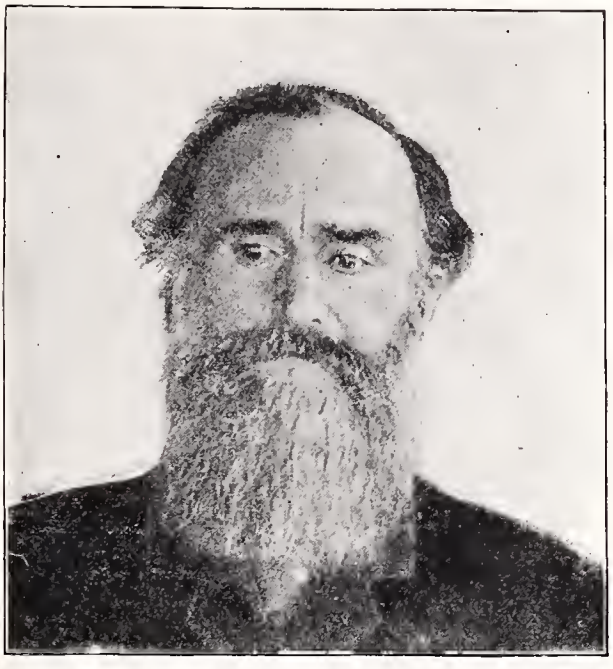

Fig. 22.—Paranoia; Delusions of Grandeur and Persecution.

The immediate cause for the establishment of the delusion of persecution may be failure to succeed; especially does this show itself in the professional walks of life. The worry and mental anxiety, perhaps overwork and strain, may result in a more or less sudden delusion of great self-importance, of great ability in their special lines of occupation, perhaps as a painter, a physician, or a banker.

This idea of a conspiracy against them, in paranoia, is not as a rule sudden in its development: it is a gradual process. Many peculiar things have occurred which the patient at least is unable to understand. These occurrences at first do not attract attention, but gradually they force themselves on the individual as having some particular meaning especially for him. This is not uncommonly seen in the ignorant, and the very fact of this ignorance is used by them as an argument in favor of their

delusion being the truth. It is not rare for them to entertain for a long time doubts as to the reality of the delusion. This was plainly seen in a negro, born in the South, who had had little or no education. He had been brought up without discipline or training. His first appreciation of anything unusual was hearing his name called at night, waking him up from his sleep. He at that time and subsequently thought it was simply a part of a dream. Later he began to think it was peculiar, and on investigation found that no one in the house could possibly have called him. He then reached the conclusion that it was the voice of God calling him, an ignorant negro, to be His prophet and special messenger to the people of the whole world. His personality was completely changed; he began to study out passages of Scripture especially applicable to his new vocation and to assume the position of a prophet. His confinement became necessary, and this seemed to him the opposition and persecution from the powers of darkness which were naturally to be expected. In regard to all other affairs he was intellectually as able to carry them on as formerly. His commitment to the asylum he accepted and was not at all depressed by it, believing absolutely that in the proper time God would provide a way to have his plan carried out. There is an appearance of self-satisfaction and exaltation and personal self-importance about him which is peculiar to these cases. He sees and laughs at the pretensions of others to similar aspirations, but is not disturbed at all by any doubts as to his position.

This acceptance of their surroundings without opposition is not by any means always present. In fact, in almost all cases every opportunity is taken to appeal to friends or the public for release if confined. Epistles, many and voluminous, are sent, especially to those holding official positions. The case above referred to was arrested for addressing letters to the President and for attempting to obtain an audience with him.

Ambitious Paranoia will fall properly under this heading. There are always delusions of grandeur present. They not infrequently take on the character of a political nature. There is a belief that the political world is corrupt and needs reformation. They are especially called either to assume high office or to remove those in power for the purpose of allowing others to take their place.

There is little doubt that many of the members of the various secret organizations, as the Nihilists, Anarchists, and various religious sects, are paranoiacs. The danger from such persons to the community is seen in the fact that intellectually they are capable of carrying out their plans, and possessed by the delusion, no fear of consequences can prevent them from attempting to carry them out.

There is usually, indeed, in these cases more or less mental weakness which may eventually pass on to dementia, but the progress is generally slow. The lack of mental balance or power is evident in the delusion itself, which is often an improbable or impossible belief. Their methods of reforming the world or establishing a righteous form of government, being foolish in every detail, are an evidence of mental weakness. In many cases there is a motive for the acts committed, often some position being sought which would be of advantage to the individual himself. The fact that he has absolutely no knowledge of the duties of the office has no bearing on his opinions of his ability to fill the place. The delusions are not by any means always single, they may be almost numberless; but they, as a rule, pivot around some central delusion, as the belief in their being descended from the royal line, or that they are prophets or great inventors, etc. This development of new delusions was well illustrated in a patient for many years under observation in the asylum, in whom the delusion of persecution was very marked.

Examples of political paranoia, where the element of self-interest or revenge introduced itself along with undoubted evidence of insane self-exaltation and a belief in their mission to remove certain officials, who prevented the proper carrying on of the government, are shown in the histories of Guiteau and Prendergast. In both instances the knowledge of the character of the act which they committed was full and complete, and the consequences thoroughly known. However, in neither case did they expect to suffer these consequences, but looked forward to the applause and appreciation of the public. *There is a marked difference in the motive and in the mental reasoning in these cases from the form of insanity included under the head of irresistible impulse.* There is, as we have previously said, however, grave doubt whether responsibility can be considered as absent.

Querulant Paranoia.—Das Irresein der Querulanten und Processkrämer; Paranoia litigiosa. We find the same elements of egotism and delusions of persecution in these cases as in the other forms of paranoia. They are always in some form of litigation, either on their own account or for some one else, or for some class or principle. It is not infrequent for some cases who have been confined in an asylum, after their release, to start a crusade against all institutions. Endless suits for inventions and patents which they claim have been stolen from them, are instituted. Numerous letters are written, judges are appealed to, or others high in power, as the President or the king, are written to. Their egotism is usually shown by their belief in their own methods and plans of obtaining impossible results. Without understanding legal processes they may put together a large mass of high-sounding words, meaningless and useless, with a profound belief in their weight. Not succeeding in their plans, the result is always ascribed to the treachery and corruption of the courts and judges or to the general failure of justice in this world. The feeling of persecution soon allies itself to this condition. They feel themselves martyrs, their opponents have used bribery and other evil methods against them. There is always present a certain absurdity in their plans giving evidence of their mental weakness. The persistence in their beliefs and in their attempts to carry them out is often remarkable. No amount of work or delay or number of defeats seems to have any effect in discouraging them. A lawyer familiar with legal processes may, as in one instance under observation, carry out his plans with considerable acumen, observing the proper legal methods.

The inconsequence of some of the charges, the absolute failure of producing any creditable testimony, or even at times the failure to make any attempt to do so, is very striking and illustrative of mental weakness. At times, however, such paranoiacs may get others to believe their statements and obtain their support. There is always a dangerous element in these cases, for not infrequently they show evidence of violence in revenge for their supposed injuries, and often against those holding high official position. This may take the form of hatred to the lawyer or judges or others with whom they may have come in contact or against an unknown official, on the

general principle that all are corrupt and must be removed before justice can be obtained.

The general type of paranoia is seen in all these cases; the form differs only in the line which the delusion happens to take. They are ready and often cunning in their defence when on trial, never for a moment allowing the plea of insanity, protesting their sanity, and in this respect resembling especially the political and religious reformers. Hallucinations and illusions are rare in these cases. The provocative or exciting cause is not infrequently based on some actual or fancied wrong done them. On investigation, however, there will usually be found evidence of hereditary disease in their family history, or they will show marks of physical abnormalities, or at least they have always been considered eccentric if not actually insane by those who have known them. The question of responsibility in criminal cases of this class presents unusual difficulties.

The law is not uncertain in its statements, but litigation is frequently protracted, expert testimony varying with the number of experts called. The jury, left in doubt, generally decides on its own impressions, and in times of general public excitement usually against the plea of insanity and consequent irresponsibility. There is usually little doubt of the act having been committed, nor is any attempt made to conceal it, although at times plans have been well laid for escape. The egotism and feeling of self-importance, however, rarely permit the individual to remain long quiet. The almost irresistible desire for notoriety soon leads to exposure, and not infrequently there is a voluntary acknowledgment of the act. Conspiracy is rare; the combination of others with them in their plans scarcely ever occurs. This fact alone is strong evidence of their insanity.

Religious Paranoia; religious insanity.—This form of mental disturbance, in which delusions of a religious character are the prominent feature, is not rare.

S. M. (Fig. 23), female, æt. 46. Duration of disease fifteen years. Patient has delusions of a religious character; thinks she has a mission to proclaim the rights of the widows and orphans, and is being persecuted.

Was arrested in the Cathedral for creating a disturbance. Has great desire to dress in a showy and gaudy manner. Delusion in regard to her greatness continues to increase, and she has become more affected in her manner and showy in her dress.

The expression in the face shows clearly the absolute feeling of self-belief and satisfaction.

We observe in various other varieties of insanity conditions in which hallucinations and delusions of a religious type are prominent features, but they lack the systematized logical process of thought which is the characteristic feature of paranoia

FIG. 23.—Paranoia; Delusion of Grandeur and Persecution.

in general. In the latter the onset may be sudden, but is in fact rarely so. A careful history will develop that peculiarities in mental relations have been observed from childhood, perhaps a close concentration on one's self, a condition of mental reserve. It is true that there are exciting causes, as perhaps a revival going on at the time may be the beginning of the disease, so that its onset may appear acute and sudden. Again, financial

or domestic stress, disappointment of the affections, overstrain from excessive study, or physical causes, such as the developmental periods of puberty, the climacteric period, etc., may appear as the direct exciting cause of the disease. These are, however, only, as we have said, the exciting causes, the real disease consists in the hereditary congenital degenerative state. It is especially important that we should distinguish this form of paranoia from the ordinary delusional form of insanity common to many conditions of mental disturbances, as in paranoia we have to do with a chronic, incurable state, often a most dangerous form of insanity so far as the peace and security of the community are concerned. Delusions of an imperative character exist, leading to commission of acts usually not impulsive in character, but founded on well-defined beliefs, with aims and designs of a far-reaching character, which nothing but force and repression can prevent being carried out. These persons are willing to die the death of the martyr for the sake of their belief, and possessing, as they frequently do, considerable mental ability, perhaps eloquence, may induce others to believe with them that they are the special agents of God to carry on His behests, or to organize religious reforms throughout the world. Many prominent figures in history have without doubt been paranoiacs. The crudity of the delusion depends largely on the education and social position of the person affected, as well as on the manner in which the evolution of the delusion has become gradually and fully developed.

Religious paranoia may manifest itself among the ignorant as well as the learned, among those living in the quietude of a small town or in the city. It is not rare among the professional classes. It is not uncommon in the ignorant. In this respect it is similar to the other forms of paranoia which we have referred to. It is this very fact, when occurring in the latter class, which doubly confirms them in their belief in their special selection by God as his divinely appointed messenger. They fully appreciate their ignorance and lowly station in life, and reason that they could not possibly of themselves have such visions of God or the Virgin or such conversation with these holy personages unless they had been chosen of God himself. This transformation of their personality is usually associated with exaltation, rarely depression, except, perhaps, in the beginning when

more or less mental confusion exists, when the hallucination and illusion of sight and hearing are more or less novel or infrequent and have not as yet been classified and evolved into a fixed delusion. There is almost invariably an erotic element in these cases, but it is not the primary or fundamental form of the delusion. We have indeed a form of paranoia in which eroticism is the basis of the delusion, which we will refer to later; but in this form it is only secondary, as we often find in various well-defined forms of insanity, as melancholia, mania, epileptic insanity, etc. In fact, whenever the higher ethical powers are in abeyance the lower sensual nature manifests itself.

Paranoia is rare in any form before puberty—that is, systematized delusions are not present in childhood. Certain mental and physical peculiarities may give strong indications of its future development, but it is rarely manifested before that period. However, at this time and during other developmental periods, it is especially apt to manifest itself. Under fortunate circumstances of life, wise educational care, absence of mental strain, a paranoiac may never have his delusions developed: success or the development of the mind in other directions may entirely overcome the inherited tendency. On the other hand, if the paranoiac becomes a priest or nun, the fixed attention on religious subjects may result in this form of insanity; not indeed that religion tends to produce insanity of a religious type, but we that perhaps find more paranoiacs, as yet undeveloped into those with systematized delusions, naturally selecting such religious separation as their mode of life.

Tuke, in the "Dictionary of Psychological Medicine," under the head of religious insanity, describes seven forms. These, however, do not, properly speaking, all belong to paranoia. Religious delusions may be classified according as they—

"(1) Accompany the mental development of over-stimulated and injudiciously educated children. The usual form is morbid fear; he fancies he has neglected some religious duty, and he is before long overwhelmed by remorse for imaginary sins.

"(2) Characterize the insanity of puberty. Here the mental depression and fear of death lead to the desire to perform some religious act as penance.

"(3) Are caused by self-abuse. The patient is introspective, falls into the delusion that he has committed the unpardonable

sin. Auditory hallucinations, visions, trances, and ecstasies are common. Suicide and fearful self-mutilation may result."

I would especially confirm the views of Tuke in regard to this class. While among masturbators there is not infrequently a marked degree of self-importance and exaltation associated with delusions of a sexual character in relation with the Virgin or Christ, it more frequently takes on the form, in my experience, of depression, in which their condition is altogether ascribed to their habits, which God is justly punishing them for. Many trivial errors of childhood will be recalled and self-accusations made, which take a far more important position in their minds as the cause of their hopeless condition than many more recent and more vulnerable acts, concerning which they will talk with but little repentance or sorrow.

A young woman who had led the life of a prostitute for several years became rather suddenly melancholic, bemoaning her fate, that she had committed the unpardonable sin, that her soul was lost, etc., but dwelt especially on an occurrence probably not based on fact, that she had attempted while a little girl to have unnatural relations with a New Foundland dog.

All these cases occurring in melancholia, as has been said, differ from the systematized religious delusions of paranoia, and complete recovery is possible.

"(4) Are associated with (so-called) paranoia. Sexual excitability is often associated with misapprehended religious duty."

This combination in a neurotic subject has repeatedly led to extravagant ideas and the foundation of fanatical sects. Texts of Scripture are applied personally, and nothing is too absurd for adoption under the guise of superior spirituality. The author has reference in this subdivision to the form of religious paranoia which is the subject of this chapter. It is not necessary that religion should have even interested this class previously to their delusion. The casual reading or hearing of a passage of Scripture may be the starting-point, and may occur in a person ignorant not only generally but in regard to the Scriptures themselves. They not infrequently become thereafter students of the Bible, selecting and memorizing passages which apply to their special delusion.

"(5) Are associated with epilepsy, dementia, and general

paralysis. In epilepsy Dr. Hurd says: 'There is never or rarely any sense of religious fear or unworthiness, but rather a sense of satisfaction in the performance of religious duties.' In general paralysis as in mania there may be extravagant delusions of religious importance.

"(6) Are observed in melancholic and climacteric insanity. Here the delusions may be the result of the influence of the special religious training.

"(7) Arise in chronic mania or toxic insanity. These delusions are usually of an exalted character."

In conclusion Tuke well says in regard to the course and determination of religious delusions: "As they are frequently associated with the insanity of pubescence the study of developmental insanities bears especially upon the subject of this article. The religious delusions which accompany masturbational insanity are not necessarily incurable. They are, however, liable to become persistent and are not readily amenable to treatment. They may be considered incurable whenever the patient has reached the stage of religious extravagance, which is surely indicative of mental deterioration.

"*The religious delusions of paranoia are essentially incurable*, being the legitimate development of a mental twist and the outgrowth of an abnormal personality. They eventually become thoroughly assimilated by the mind, an integral part of its constitution. During the stage of persecution they may at times pass from the mind, but after the stage of transformation they cannot."

I have quoted somewhat fully from Tuke, as he clearly defines the delusions of a religious nature as they appear in the various forms of insanity, and differentiates those peculiar to paranoia, as shown in his fourth subdivision.

Erotic Paranoia—Erotomania—a form of paranoia in which the delusion pertains to love of the opposite sex, and is usually, as Krafft-Ebing has said, directed toward one in a higher station in life, or at least toward one who has given no evidence of any knowledge of that person's existence. It is essentialy a mental distortion, the result often of hallucinations and illusions. The slightest acts are given a significance: a glance is taken as directed toward them, etc., etc. Notices in papers are construed into reference to their relations. The

object of this affection may never have been seen or may not be known, except through the visual hallucinations. This does not in any way affect their belief in the existence of the mutual love. The laborer may become the beloved one of the princess, indeed he may be sought after. There are always present evidence of hereditary taint, signs of degeneration.

The course of the disease is similar to paranoia in general, differing only in the special delusion. The exciting cause varies, often being excessive venery. Visions of a sexual character may be present, and this is specially so where the delusion has reference to some exalted person, perhaps never seen except in public prints. There is a tendency in many of these cases to develop a delusion of a changed personality to correspond to their exalted affections. The circumstantial and detailed description of their own personality, and their description of the relations they have with their imaginary loved ones, are remarkable. This grows in distinctness with time and repetition until it has become thoroughly systematized. It is usually later that the delusion of persecution associates itself to this condition, after perhaps some public exposure has led to their apprehension.

There may be religious delusions combined with the erotomania, and indeed sexual desire may not be present to any marked degree. There is little attempt at concealment, nor is there any shame felt. There is the same feeling of a special call to fill a mission as observed in the class of reformers. The evidence of mental weakness is apparent.

There is another class of these cases, however, where apparently there are no hallucinations or illusions and in which the intellectual field is but little involved. The delusion is simply one of being loved and loving one who has shown absolutely no regard for them, or perhaps is not even conscious of their existence until their presence is forced on them, or they are followed from place to place, or various signs, letters, etc., are constantly giving them proof. It is especially here that the delusion of persecution arises, and the obstacles put in the way to prevent them from seeing the object of their affection are ascribed to a conspiracy. Never is the object of the affection considered a party to this, but rather also the victim. This at least is at first the belief; it may finally take the form of hatred to the former object of their love, and result in a desire for revenge.

These cases are often dangerous in the extreme, following up their threats with skill and cunning; and being little affected mentally except in regard to this one fixed delusion, their judgment is good in all other respects. There is usually, however, evidence of some mental weakness. It is often most difficult on examination to find any symptoms indicating insanity Especially if the patient is at all suspicious he will talk pleasantly and intelligently on all other subjects, and will enjoy his success in eluding the various questions put to him. The most wary may be deceived by them, and even the subject of their delusion may be so mixed with known facts as to convince many who are not conversant with all the facts. It is rare that they will admit that they are subject to a delusion or will accept the plea of insanity as a defence. However, when in confinement they may, for the purpose of obtaining their liberty, admit they have been subject to a delusion which they no longer entertain. These statements are always to be received with caution, as, from the opinion already given, their mental state is an incurable one. The recovery from a delusion, no matter how dangerous in its character, in mania and melancholia may be permanent, and its recognition by such cases is often the first sign of a permanent restoration to mental health.

The well-known case of Dougherty, who labored under the delusion that a celebrated actress entertained feelings of regard for him, illustrates what has been said. He followed her from place to place, even to Europe. Every unconscious movement would be ascribed to some secret acknowledgment by her of his regard. He was enabled by his skill as a telegrapher to obtain the necessary means to follow out his plans. Nothing seemed to discourage him; he possessed the usual feeling of exaltation and self-satisfaction peculiar to these cases. He at one time acknowledged that his opinion in regard to her liking for him was an error, but this was only for a purpose of his own. The dangerous character of the man was manifested later by his murder of a physician in the asylum to which he had been sent. His trial for this act, however, resulted in conviction, the plea of insanity not being accepted. There is no doubt that according to the law as it now stands the conviction was a just one. A clear knowledge of the right or wrong of his act existed in the mind of the prisoner; but we have to deal with a person who

does not allow that question to arise in his mind. His desire is the only thing which he thinks of, all moral and physical obstacles are disregarded. It is this disregard of consequences which is the strongest evidence of their insanity, combined as it often is with absolutely impossible methods of accomplishing their ends. The question, however, of their responsibility before the law is one that really belongs to the field of sociology.

INSANITY FROM CONSTITUTIONAL NEUROSES.

The various neuroses are described in books on diseases of the nervous system, and I shall not describe them except in so far as they bear on mental diseases. Under the head of neuroses are included the so-called functional diseases, which show no structural or organic changes in the organs which are affected. We find the same conditions in the nervous system. There is indeed some change due to malnutrition, exhaustion, or some toxic agencies, but as yet what these are no investigation has satisfactorily settled. As advances are made in our study of disease this class will be reduced in number, as from the very nature of things disease cannot exist without an adequate cause. Epilepsy, hysteria, pursuing as they do a developmental and chronic course, must be due to some definite and deep-seated lesion.

Neurasthenia.—Nervous prostration represents in general a lowering of the tone of the cerebro-spinal system. It may especially involve the brain or the cord, in which case the symptoms all point to functional rather than permanent or organic disturbance of function. There is usually, however, an affection of the whole nervous system, although one part may be more involved than the other. We may find almost absolute loss of function, an apparently sudden inhibition both in the physical and psychical fields. This inhibition often, however, disappears as suddenly as it arose. We see all the evidence of vaso-motor changes, temporary, as a rule, although at times they pass on into definite chronic states, ending in special neuroses resembling, although rarely exactly, those previously described.

Neurasthenia must at present be accepted as a distinct nervous state, and while under its head such conditions as hysteria, hypochondria, melancholia, etc., may be falsely included, as

many similar symptoms exist in all, yet despite this confusion careful examination will show that we have to do with a class of symptoms which, irregular and contradictory as they may appear, go to make an entity, as well defined and positive as other diseases, physical or psychical. A certain opprobrium has attached itself to the term or rather to the individual with the disease, as in the case of hysteria, as if the patient were capable of controlling or banishing altogether the symptoms he complains of. There is also considerable confusion in separating these latter conditions from each other. This is not so surprising, as they have many symptoms in common, and indeed one disease may engraft itself on the other or become associated with it.

Foster has defined neurasthenia as "a condition appearing in the early and middle periods of adult life, presenting objective symptoms of deranged functions of the nervous system, slight in degree but definite in character, and persisting for months, for years, for life. There is inability to walk more than a short distance without fatigue; a variable increase of myotatic irritability; headache; aching or pain in the back and legs, and spontaneous sensations of tingling, formication, heat and cold. Dyspepsia, constipation, and other derangements of the functions may result in anæmia. There is a mental phase in the condition, the patient being irritable, unable to pursue a consecutive train of thought, or there may be a cheerful, egotistical resignation to invalidism. It may be caused by emotional or mental strain, worry, fright, etc."

He further makes several subdivisions which more or less accurately give its symptomatology, *i.e.*—cerebral, cerebro-cardiac, cerebro-gastric, cerebro-spinal, gastric, genito-urinary, neuralgic, spasmodic, spinal, vaso-motor, and sexual neurasthenia.

It is rare, however, that we find any one of these forms distinct and by itself. They are usually associated, the cerebro-spinal type being the most common, with perhaps a predominance of a certain class of symptoms, as spinal irritation or a feeling of mental incapacity and fear of insanity.

Neurasthenia is by no means a disease peculiar to modern times or to any one country. It has been described by the older writers, even by the ancients. It has only come more into

prominence since its symptoms have been more clearly grouped. There can scarcely be made a differential diagnosis between it and cerebral and spinal irritation. Its symptoms are multitudinous and variable, but all point toward exhaustion and a departure from normal reaction. Their interest to us lies in the bearing they have on mental disease, either as prodromal symptoms of distinct psychoses as melancholia, general paralysis, epilepsy, etc., or in their relation to those ill-defined mental states lying in the so-called borderland of sanity, in which impulses more or less imperative manifest themselves. Here, perhaps, belong most properly all those peculiar mental disturbances which express themselves in fear of disease, frequently of insanity, of open places (agoraphobia), of closed places (or claustrophobia), etc. We shall describe these conditions later under this heading. These symptoms may pass beyond mere eccentricity into permanent states, which must be regarded as a true degenerative condition.

Neurasthenia may be regarded as a degenerative state, at least in the chronic forms. It is more often congenital or hereditary than acquired. We have, in other words, a predisposition to disease, a soil in which exciting causes as worry, mental strain, shock, excesses, alcoholism, etc., have an effect not resulting in the healthy. The most common exciting causes are overstrain, physical and mental, associated with domestic or financial loss. Shock from an accident, whether accompanied by actual physical injury or not, may precipitate the sudden or gradual onset of nerve exhaustion. Disappointment in the affections or in the attainment of some much wished-for position may excite in a constitution predisposed, either from hereditary taint or from long-continued overwork to disease, this tendency to an absolute collapse. It is not infrequent to find such conditions result in unsuccessful candidates for high political position; again, in the young after the excitement and exhaustion consequent upon the severe ordeal of an examination. Shock of any kind is a very common cause, as has been said. The frequent trials for damages in our courts have done much to develop an extensive literature concerning the consequences of such occurrences on the nervous system. Some cases of interest have arisen in which claims have been made against the telegraph companies in which there

has been neglect or failure in conveying the proper message, resulting in a shock to the recipient. Death may result in some instances; truly it is natural to expect some effect tending to disease of a serious nature.

A gentleman under my observation was present in an accident on a railway in France. His car was not involved in the wreck, and he was very active in rescuing and aiding the injured. He continued his journey, and it was not for some time that symptoms of a nervous character manifested themselves. He became timid while travelling, and would have recalled to his remembrance all the horrors of the scene, were there the slightest delay on the train he was travelling on. This gradually developed into a fixed morbid fear of travelling, and later he became a distinct example of neurasthenia.

Exhaustive diseases associated with pain, especially if much sleep is lost, are prone to result in this disease. Loss of sleep is indeed one of the most marked symptoms of neurasthenia; it is also one of the commonest causes of it. Venereal excess, especially masturbation, is often the basis of the exhaustion of the nervous system, and when this is the cause it gives rise to a form of neurasthenia peculiar in itself, and may indeed be the origin of many of the cases of sexual perversion.

The symptoms peculiar to neurasthenia are essentially cerebral and spinal, and the latter are in fact subordinate to the former.

"While neurasthenia is protean in its manifestations, there are still certain symptoms rarely in default, which for this reason have been called by Charcot neurasthenic stigmata. These are: a special form of headache (casque neurasthénique) and a sensation of emptiness in the head; insomnia and disturbed sleep; psychic adynamia; motor enfeeblement; spinal hyperæsthesia, and rhachialgia with points of election (plaque cervicale, plaque sacrée, and coccygodynia); gastro-intestinal atony; genital and vaso-motor disorders" (E. Régis, "Practical Manual of Mental Medicine").

In our study of the disease especial reference only will be given to the mental symptoms. Such patients complain of a feeling of loss of mental power, especially the power of concentration upon any given subject. They cannot read because their attention soon wanders, or they experience great fatigue. They are unable to carry on their usual business, either from some

cause as mentioned above or a fear that they will be unable to do so correctly. An almost insane dread of meeting business or social friends exists. The idea of an appointment, the anticipation of it, will often be sufficient to start up a train of symptoms, in which there is especially shown a loss of will power, even to the extent of absolute motor inability. The emotional state is also very much affected, as shown by a tendency to burst into tears, or even laughter; this is not really based on any true grief or joy, but seems to be something outside of themselves. There is usually a tendency to irritability and anger on slight provocation.

This state is fully recognized by the patients, who are usually introspective and love to talk over their various mental changes. Depression even to extreme melancholia is not uncommon as a result of morbid fear of losing their minds. They make constant threats of suicide, or fear that they will commit such an act. In fact such attempts are often made, but usually with no full intention of carrying them out. There is always a fixed idea present which has special reference to their mental condition. They constantly assert that they can bear any amount of pain if they could only get rid of the peculiar feeling of oppression and weight in the head, and of the feeling of absolute loss of mental power and ability to exercise their will. Under special excitement, or if carried away by the necessity of action, or even in extreme pleasure, they find themselves capable of carrying on plans or doing things involving great fatigue. The reaction in these instances is often extreme when the necessity for exertion is removed.

The intellectual faculties are rarely involved, the memory is not impaired. When the interest is awakened they will remember all the details and every direction given by the physician, and if they have faith in him, will depend on and carry out with exactitude all his directions.

Hallucinations, illusions, and delusions are rare, nor do we find a tendency to development into such forms of mental disease characterized by them. They seem to be subject to impulses, to doubts and fears, which occur suddenly. Under certain impulses they may be able to walk miles without fatigue; there is, in fact, rarely any actual motor weakness. At another time the sense of motor weakness is so extreme that they may

collapse before going half a block, and find themselves incapable of proceeding another step. These functional motor disturbances are shown also in various spasms of the muscles, especially of the face; or of the eyes, in frequent winking, or of the corners of the mouth. This may indeed involve the whole body. This is especially so if attention is drawn to it. It becomes indeed a habit, at first voluntary, but later it becomes more or less involuntary. The tremor of the hands is often shown in their inability to perform any act requiring skill; especially is this seen in writing. The mere attempt to write excites a feeling of mental and physical fatigue, although the ability to dictate a rational letter may not be impaired.

The muscular system is not impaired, unless indeed the health has been so much affected as to confine the patient to the house or bed.

Associated with these mental and motor disturbances there is much sensory disturbance. Hyperæsthesia or pain exquisite in its character may affect the head, and involve one-half of the cranium, or, as is more common, remain limited to the vertex or base. This may often be only dull in character, a feeling of weight at the base of the brain. Pain is widely distributed along the spine, and over various regions as the heart, kidneys, ovaries, and even in the bones. Pressure may elicit considerable pain, sometimes very extreme. Anæsthesia, loss of sensation, is not uncommon; a feeling as if the parts were dead. This may follow certain lines, as one-half of the body, or over given areas. Rarely in examination do we find any objective loss of sensation to the various tests of heat, cold, pain, or touch.

The symptoms are largely subjective. Vaso-motor disturbance is common. Sudden congestion or analgesia of the head or spine may cause vertigo, a sense of fulness, or a tendency to syncope. The pulse corresponds to this condition, so that we find marked variations in it, from a slow to a rapid one, with intermittence. These attacks are accompanied by a feeling of impending death.

Insomnia is perhaps one of the most characteristic symptoms, and the one which tends to aggravate all the mental symptoms defined. Even when sleep is present, it is usually accompanied by dreams of a distressing character, and there is no feeling of rest on waking. The interest, in a medico-legal

sense, in these cases arises when, perhaps, unreasonable antipathy or excessive friendship is present, which has influenced the individual perhaps unduly in his testamentary capacity; or, again, in criminal procedure the question of responsibility may present itself.

Many acts of these cases are, as we have said, impulsive in character, often imperative indeed. Not infrequently, especially when there is a sexual element in the form of neurasthenia we have to deal with, there exists an almost irresistible tendency to some overt and often indecent act. We will consider this in more detail under a special head. This disease belongs to the class of degenerations, and has much in common with paranoia, especially in the presence of a fixed idea. It is, however, not as logical in its development, and although at times there is an accompanying delusion of persecution, it is rare. The fluctuating character of the symptoms, the physical signs of physical exhaustion and pain, are absent in paranoia. The anxiety and depression are quite foreign to paranoia, in which indeed we usually find a spirit of egotism and self-appreciation.

The prognosis is usually good. There is, however, a possibility of termination in one of the well-defined mental diseases, especially mania or melancholia, with homicidal and suicidal intent.

It does not usually take the form of insanity with delusions, but rather that of melancholia with complete loss of hope of recovery. There is usually the desire to recover, but the constantly present dread of becoming insane may result in some overt act.

Tuke refers to neurasthenia as being a prodromal stage in general paralysis. This may be so, but is probably rare.

One such patient has been under my observation:

Male, æt. 27, a butcher by occupation. His history was negative, except that he had been overworked; he was, however, very successful and accumulated considerable money. He became sleepless and finally anxious about himself, and unable to attend to his business, which increased his anxiety. He feared that he was losing his mind. A year later he showed the symptoms of a typical case of general paresis. He became happy and self-satisfied, considered himself perfectly well, and in no way troubled himself about his business.

There could be no greater contrast than that between the previous mental state and its termination.

Hysterical Insanity.—Hysteria is essentially a disease in which degeneration is the most prominent feature. We are unable to point out the pathological changes in the brain which account for the symptoms. We class it, therefore, as a functional disturbance. Perhaps no condition involves so completely the whole nervous system as hysteria. It manifests itself, therefore, by both physical and mental symptoms. The former are multitudinous, simulating all other diseases. The multiplicity of the symptoms is, to a certain extent, a point of diagnosis; their shortness of duration and their sudden disappearance are as significant. We have noticed this same characteristic in neurasthenia, the two conditions having indeed much in common; often indeed we find them combined.

In hyteria we have to do with great instability of the nervous system; a slight cause may initiate marked mental symptoms. Despite, however, the multiplicity of the symptoms there is a certain uniformity about them, which more or less clearly defines them.

The line between hysteria and hysterical insanity is not always easy to draw. We find the emotions more affected than the intellect, and therefore the acts are of the impulsive type.

The most important element in the causation of hysteria is heredity—either of hysteria itself or the various neuroses as epilepsy, chorea, etc., or insanity. It is not rare to find in the descendants of the insane various functional diseases of the nervous system manifesting themselves, and among others this form of nervous instability. The exciting causes are various—any shock, whether traumatic or emotional, as fear, domestic loss, financial stress, disappointment in the affections, exhaustion from disease, as fever, loss of blood inducing anæmia, chlorosis, sexual excess, onanism, etc.

Hysteria is most common in young females about the age of puberty, but may occur in the more advanced in life, even indeed at the menopause; or, again, in children, although much more rarely. It is observed also in men.

The typical forms, as described by Charcot and other French writers, are not so common in this country or in England. Such cases present all the physical signs of the disease, as hemianæsthesia; hemiplegia, usually unassociated with wasting of the muscles; contractures, tremors, choreiform in character;

unilateral loss of vision, taste, etc. There is usually also great vaso-motor disturbance, cardiac palpitation, unilateral sweating associated with heat or cold of the extremities. This class of symptoms is often very definite, but usually we find the anæsthesia is but partial.

The paralysis, when present, whether hemiplegic in type or paraplegic, is too absolute and complete to render a diagnosis as a rule difficult. Still the previous history of other attacks is the most important fact in establishing an absolute diagnosis. Outside of the general physical condition which we have described are the convulsive seizures, so common in this disease. They are frequently epileptoid in character, and when so we have a condition called *hystero-epilepsy*, which is essentially hysteria, however. *A special characteristic of these convulsive seizures is that, as a rule, the patient appreciates their onset and therefore receives a warning more often than in epilepsy.* I believe, however, that these attacks are as impossible to check on the part of the individual as are true epileptic seizures. They, however, are usually able to get to a place of safety before the onset of the attack, although this is not always the case. The convulsions in hysteria of the milder or more usual form differ from those of epilepsy in that they are irregular. There may be rapid clonic convulsion, limited to one side, or one hand, or to both feet; more rarely there is a sudden fall, followed by clonic and tonic convulsions. A complete loss of consciousness is rare. Patients will generally remember what has occurred, and recall those who have been present. Following the attack, as a rule, there is not present the tendency to sleep which usually occurs in epilepsy.

A distinct mental state is present, which manifests itself by excessive talking, crying, or laughing, showing that cerebral excitement is present. Especial emotional states may show themselves by the attitude assumed by the patients, as that of prayer, of fear, etc. These attacks may continue for several hours, and are not infrequently followed by a mental condition of confusion, lasting usually but a few hours or again for days.

The severe form or *hysteria major* is, as I have said, rare in this country. Charcot describes three stages of the convulsive attacks, first the epileptoid, resembling very closely an ordinary epileptic seizure; second, one in which we have ex-

treme opisthotonos, pleurosthotonos, or emprosthotonos; and a third stage in which there is less of the convulsive character but mental symptoms are more marked.

There is excitement, as shown by the tendency to talk or sing, or to assume special attitudes indicative of certain emotions. There is little difference in their forms except in the character of the convulsive seizures. We may find the convulsive stage entirely absent, there being only successive attacks of mental excitement, a true maniacal seizure, which may require restraint. These attacks may occur several times during the twenty-four hours and continue for weeks. We frequently observe a religious or an erotic element in their conversation and their attitudes. There is no absolute loss of consciousness of what they are doing or saying, although it is beyond their control. They are frequently obscene in their language, and show signs of lasciviousness.

These acute attacks of hysterical mania may be absent, there being simply a mental condition which by its general symptoms of emotional instability, unreasonableness, selfishness, jealousy, and tendency to quarrel with every one, defines itself as hysteria.

In women all these states are increased at the menstrual epochs; especially is this the case when sexual ideas are present. There may be excessive masturbation at these periods. This element increases and prolongs the mental excitement. This is shown by the following case:

Miss L., æt. 17, a modest and accomplished young woman, is subject at her menstrual periods to attacks maniacal in character. She becomes suddenly excited, usually at night, and is aroused from her sleep by some fright; she cries out, talks upon innumerable subjects, has no convulsions, but has to be restrained owing to her incessant movements. She has such a sense of genital irritation that she resorts to masturbation, which she is unable to refrain from. These attacks are followed by a condition of extreme exhaustion, lasting several hours to several days, in which she seems to be unable to appreciate what is going on around her. These attacks may pass into cataleptic or trance states, lasting for days and weeks.

In an Italian boy brought to the hospital in an apparently unconscious state, we watched carefully for any sign of simulation or fraud. There seemed to be almost complete anæsthesia—a needle could be passed through the fleshy part of his leg or arm without apparent

feeling on his part. Any position in which his arm or leg was placed remained fixed for a long time, no matter how uncomfortable it might be. Carefully watched, he would lie for hours in the same position, the respirations being shallow and infrequent. There seemed to be no desire for food, which was never voluntarily taken. Having, however, stopped feeding him by force, and all food having been removed, he was observed one night to rise from his bed and get some articles of food from tables of the other patients.

This case corresponds to those which have been reported of the trance state, fasting mania, etc. Careful investigation will usually show that there is more or less simulation and fraud connected with them. There is without doubt a true condition of partial loss of consciousness similar to the hypnotic state.

In the constitutionally hysterical temperament, which is a fixed condition and in which paroxysmal seizures are absent, melancholia is more common than mania. Suicidal impulses are common; attempts are frequently made or at least threatened. They may indeed be carried out, though rarely. These patients become very depressed and possessed with the fear of going insane, or indeed of killing themselves or others. Hallucinations or delusions are rare, nor is the depression of the same character as in melancholia. There is not unusually present the feeling of self-condemnation. In children hysterical attacks are not uncommon and may be associated with epileptic seizures. We may observe true hysterical contractures, anæsthesia, paralysis, etc.

The attacks of crying, laughing, vomiting, barking, using obscene language, etc., are essentially hysterical. There is frequently present, even in these young cases, simulation or at least exaggeration.

It is among this class we find cases of pyromania, or, again, when a sexual element is present, accusations of assault may be falsely made. In fact many cases of impulsive insanity, so called, have a hysterical basis.

Hypochondriacal Insanity.—In this disease we have a condition which has passed beyond the feeling of anxiety and depression in regard to some bodily disease they may have, to a fixed idea which cannot be removed. It resembles in many respects neurasthenia, and yet differs from it in that there is greater concentration on the personal condition. The same

may be said in regard to melancholia; in both we have marked depression, but in the latter it is caused by the thoughts or delusions which may be present in the mind, while in hypochondria it is due to the actual or imagined disease of some organs of the body. In most of these cases there is a special delight or at least a feeling of necessity to describe all the individual symptoms of their disease. The tongue, pulse, digestion, etc., are carefully and anxiously observed.

The condition is generally observed in those with a predisposition to disease of the nervous system, especially those hereditarily affected. It may lead to a mental condition which completely inhibits all ability to do anything except to think and talk of their illness. The depression may become so extreme as to lead to suicide. We at least observe great loss of will power and inability to concentrate the attention.

Many of these fixed ideas of hypochondria refer themselves to sensations in the brain. Every feeling of fulness or pain in the head is dwelt upon. There is a feeling of complete inability to fix the attention on anything. Reading or writing causes complete exhaustion or pain at the vertex or more usually at the back of the neck.

Subjective sensations are common. The patient will complain that he can feel the blood all coming away from his brain. He feels certain that he will become insane, that his brain is dead, and so forth. These feelings are not infrequently excited by what has been read, especially is this so if masturbation has been practised at any time. This class of patients corresponds closely to those of sexual neurasthenia.

The most bizarre yet fixed beliefs may exist, however.

A young man under my observation maintained that one-half of his face was constantly getting smaller. This prevented him from keeping at his work, and finally he went voluntarily into an asylum for a year. During this period careful measurements were taken, which conclusively showed that there was no difference between the two sides of his face. He remained under my care for some time, but no argument could convince him of the truth of the facts.

Hypochondriasis in connection with the digestive organs is very common—there may be fixed ideas of disease of the stomach or intestines. There is frequently a feeling that the physi-

cian is deceiving them. The depression is often excessive, preventing all attempts at occupation. Sleep and general nutrition are interfered with. Any new disease is readily taken up by some of these cases.

Suicide is not rare. Hypochondriasis in regard to the sexual organs is frequently present in the young, more especially among men. There is usually a history of masturbation. The fear of impotency soon arises, the organs are felt to be undergoing atrophy; the penis is usually felt to be cold. This may occur about the time when marriage is contemplated or may have no reference to it. It was clearly illustrated in a patient, a professional man, who gave a history of marked venereal excess of all kinds. He had married and had nine children, but was possessed with the fixed idea that his organs were undergoing atrophy. The importance of the mental condition consisted in the depression associated with it and the tendency to suicide.

EPILEPTIC INSANITY, OR MENTAL DISEASE IN EPILEPSY.

I would here follow the definition given by W. Bevan Lewis in his recent work on mental disease, viz.: "Epileptic insanity is that form of mental derangement, in the antecedent history, the oncome, and further development of which we recognize an intimate connection with the epileptic neurosis."

Cullere defines epilepsy as a convulsive neurosis characterized by intermittent attacks of short duration and variable intensity, and accompanied by a sudden loss of consciousness and generally by mental disease (see Cullere, p. 419).

The tendency of epilepsy is toward dementia. The variations in its course are those found in all mental disease—that is, the periods of excitement and of depression either alternating the one with the other or, almost as in circular insanity, one following the other. There is likewise a special tendency to hallucinations, illusions, and delusions, but they have nothing about them which is characteristic of epilepsy proper. Any distinction between epilepsy *per se* and epileptic insanity is difficult, if not impossible, since, pathologically, we have the same ill-defined condition present in which, as Lewis has well

said, the question must often be asked in an asylum, why is such a patient confined? Indeed, we find many in whom epileptic seizures occur only at long intervals and whose condition in the interparoxysmal state is apparently normal, yet during the paroxysms they are maniacal, melancholic, or are possessed of some strong delusion, and are not infrequently subject to marked hallucinations and illusions of the special senses, either preceding or following the seizure.

In our study of epileptic insanity we must proceed on the same lines as in that of the neurosis itself; in fact, insanity is a mental condition to which all epileptics are liable, and probably no cases exist in which there is not more or less mental impairment present. This subject is one of great importance, because perhaps no line of defence is more frequently adopted than the claim that there has been a history of epilepsy in the individual under examination. It is certainly very difficult to come to a conclusion as to whether at the time of the commission of the act the person was influenced or under the control of some fixed delusion which was well defined at the time.

It is perhaps advisable, where a positive history of epileptic seizure is obtainable, to mitigate the punishment for the crime, while not allowing the criminal to be held as absolutely irresponsible.

While some examples of great mental brilliancy no doubt present themselves to the experience of all among epileptics, the great majority show at least some evidence of moral or mental deterioration. In this disease, as in other forms of insanity, we find the higher moral qualities are the ones first affected, so that on the ethical side of the character the loss is most marked. The patient becomes more or less brutal, the face often shows a loss of the finer elements, and the emotional state becomes so unstable that the individual is uncertain, impulsive, and suspicious. As a diagnostic point of a true epileptic seizure perhaps the most important is the suddenness of the onset of the attack, associated with complete loss of consciousness and convulsive seizures, general or localized. The complete loss of the reflexes, as seen in the pupil, in the conjunctival response, and knee jerk, as well as the loss of reflex control over the bladder and rectum, causing unconscious urination and defecation, are additional points of value in the diagnosis. No one of these, however, can

be held as of supreme importance; their association is principally of value.

We have considered two forms or groups of epileptics: those in whom the symptoms are dependent upon a general nervous disorder—in other words, so-called idiopathic epilepsy—and those whose disorder depends upon some local brain lesion, either traumatic or degenerative. The first class more properly belongs to mental disease, although in the second class the symptoms are often not dissimilar from those observed in the neurosis proper.

The first group will, therefore, present in many instances a bad hereditary history, so that either in the parent or collateral branches epilepsy or other neuroses—insanity or alcoholism—will be present; in fact, the descendants of epileptics themselves may present these various disorders rather than that special neurosis. The proportion of insane in our asylums with epilepsy as a cause is very large. In England, out of 14,336 patients admitted to the various asylums in the year 1887, there were 1,294 epileptics, of whom 777 were men and 517 women, or about nine per cent. The appearance of epileptic seizures among the insane is of very frequent occurrence, especially in general paresis; the distinction, however, between the neurosis proper and these irregular attacks is to be observed. The maniacal condition may precede the epileptic seizure or may follow it. It very often precedes the attack. For several hours, days, or even weeks a peculiar mental state may be observed in these patients which is noted by the attendants as premonitory of a series of attacks. They may be of the nature of hallucinations, and often those associated with the special sense of smell or taste, or of hearing or sight. Not infrequently the same kind of hallucinations precedes each attack, and this is especially indicative of some localized lesion as the seat of the disease. Delusions may follow and be founded on these hallucinations, and it is especially on this account that these patients are dangerous. *The wildest mania may be the result; it is more usually homicidal than suicidal in type.* There is a special tendency to the so-called form of moral insanity in these cases. The most purposeless, impulsive, and cruel acts are committed by them at times; indeed, the crimes resemble not infrequently those committed by paranoiacs which from time to time startle the world. As a rule, they have no recollection of the acts com-

mitted on returning to consciousness a double consciousness existing in many of these cases.

F. M. (Fig. 24), æt. 45, female (colored), has tendency to become excited and maniacal. Expression of the face indicates sullenness and obstinacy.

In the milder forms of mental aberration long journeys have been taken by such persons, and even business has been transacted without there being any observable peculiarity in their actions, and on returning to consciousness they have been surprised at their new surroundings. One should be cautious in forming opinions in regard to the statements made by the patient; the motive must always be carefully investigated, as this disease may be claimed simply as a cloak for various crimes which have been committed. Alcoholism must also be excluded.

FIG. 24.—Epileptic Mania.

Automatic acts apparently committed in the dream condition may be frequently observed after an attack of epilepsy, even of a mild character. In other cases mental disturbance may appear to take the place of a true convulsive seizure, and is then called "*masked epilepsy.*" More frequently, however, these mental disturbances follow or precede a true epileptic seizure.

Idiocy is not present in ordinary epilepsy except when due to organic changes seen in infantile forms; but here there is generally associated some form of paralysis, either hemiplegia or diplegia of cerebral origin, along with convulsive seizures. This is

dependent upon actual destruction of the cortex surface of the brain, or upon the presence of cystic degenerations consequent upon a preceding inflammation, or upon direct injury and compression of the brain substance by a meningeal hemorrhage, occurring most frequently during a prolonged and tedious delivery or from forcible compression with the forceps. More rarely the condition is one of intracerebral hemorrhage. In these patients there is usually dementia in varying degrees. The epileptic seizures do not differ in character or in response to treatment from those observed in the idiopathic form. The question of responsibility in relation to crime would rarely be in doubt, as the evidence of the disease would be well shown by the palpable conditions present.

In reports of cases under my own observation there was evidence of marked degenerative changes in the conformation of the skull, actual measurement invariably showing in hemiplegic cases a diminution in the size of the skull on the affected side, while the brain frequently exhibited marked atrophy and shrivelling of the convolutions, thinning of the cortex, and dilatation of the ventricle on the same side, with secondary degenerations, extending especially in the motor tract into the spinal cord.

While the idiopathic cases do not show such definite brain lesions, still there is quite commonly a general affection of the brain of a degenerative type; and while we do not to-day hold as positive any special change in the frontal lobes, or in the temporal lobes, as formerly stated by Meynert, still in the cortex, especially, according to Lewis, in the third layer, the nerve cells are not infrequently degenerated and their nuclei filled with pigment, and the cells themselves the seat of vacuolation. We also find increase of connective tissue and involvement of the association fibres. While many similar conditions are found in other degenerative forms of mental disease—and therefore we are unable to speak of definite lesions peculiar to epilepsy—still we are certain of this much, that disease is present, and, in fact, is never absent on microscopical study of the brain.

All forms of insanity have certain varieties of symptoms in common—the change in the individual and concentration of the attention on the *ego*. We next observe some alteration in the feelings and thoughts and actions, and finally dementia. In epileptic insanity we have all these functions more or less in-

volved, and in a hundred cases which I made the subject of study, in none were these conditions absent. It is always difficult to get an accurate history of these patients.

One element observed in almost all cases is what might be called "religiosity." It is of an emotional type, and is perhaps more common among women. The attention to prayers and desire to attend religious services are very marked; however, it seems to be merely a superficial feeling, as any remorse for acts committed while in this state is entirely absent, and indeed, when interrupted in some specially brutal act following an expression of a high moral character, no appreciation of the discrepancy is apparent.

Clouston states that epileptic insanity is not so common among women as in men, nor does it respond so readily to treatment by the bromides. One feature—the suicidal impulse—seems to have been in my experience more frequent, especially among women, than is commonly recorded. Cullere and Clouston, however, report several such cases. In regard to treatment, the same course should be observed as in the neurosis itself.

Among criminals guilty of the minor offences, as petty larceny, etc., epilepsy is very common. We here find a bad hereditary history; but among burglars or forgers, whose crimes are against property, mental disease in general, as well as epilepsy, is rare.

As seen from our remarks on the character of the attack in epilepsy we must, especially in epileptic insanity, distinguish between the mental conditions immediately preceding, during, and following the convulsive seizures, and during the intervals of the attacks.

This is of great importance in a medico-legal sense; and, again, great care must be used to ascertain whether attacks of mania at times take the place of convulsive attacks. *In speaking of transitory mania* we referred to several writers as holding the opinion that the condition in reality is an epileptic seizure. The diagnosis, however, depends largely on the fact of well-known previous seizures, and also as to whether the act was committed just previous to an epileptic seizure or following one. During the intervals between the seizures the mental condition seems to be one, in many cases at least, in which dementia is

[1] Tuke, "Psych. Med."

not present, and in which the individual is fully conscious of all his acts. In these cases, therefore, we must carefully search for some motive for the act. If that is not present and the act is of the impulsive type, it is probably dependent on an hallucinatory condition due to the disease. The complete loss of memory of all the particulars of the act until informed, if deception in this respect can be excluded, is also of much diagnostic value. Remorse for the act will also be present when there is not considerable mental weakness. Among, however, the cases where the character has been changed, although no well-defined condition of dementia is present, this feeling of remorse may be absent. This is not infrequently seen in hystero-epileptics and in those whom the attacks consist mostly in transient or partial loss of consciousness, without convulsive seizures. Here we find a mental weakness indeed, but not so extreme but what the full knowledge of right and wrong can be appreciated. There seems to be rather an absolute disregard of the ethical or moral side of the question, and the only repressive agency is the fear of punishment.

Simulation of epilepsy has been referred to especially among the criminal classes and among prisoners.

The diagnosis in regard to the character of the seizure is often a very difficult one—the presence of the reflex response on the part of the conjunctiva, and the response to light on the part of the pupils, indicate almost surely that the attack is not truly epileptic. The thumbs are usually turned into the palms in true epilepsy, but this is not always the case. When simulation is suspected, it is important to watch for any appearance of suspicion on the part of the personator, and again we often find that the attacks are most severe and frequent in the malingerer when he is under observation. In a true epileptic seizure the onset is sudden, generally without warning, and no recollection of the events occurring during the seizure is present.

The prognosis in epilepsy is unfavorable as far as a cure is concerned, and this is of considerable importance in regard to the legal aspect of these cases. Months and in rare cases years may intervene between the convulsive and maniacal seizures. It is especially here that there may exist doubt as to the diagnosis. We may have the condition called by Morel épilepsie larvée, in which, as we have said, the convulsive seizure is re-

placed by a maniacal state. Falret describes this form as follows: The invasion of the morbid phenomena is sudden, the acts are instantaneous and of exceptional violence, the hallucinations are usually of a terrifying character, there is also absolutely no recollection of acts committed. A peculiarity in these attacks is that if they are repeated the same phenomena occur in the same order. This is the case in the ordinary convulsive seizure, the psychical convulsion being analogous to the physical one. In this respect numberless cases could be cited of maniacal attacks of violence, especially homicidal, just preceding or more usually following epileptic seizures. In these instances there is no doubt of the mental condition and absence of responsibility. It is, however, often difficult to make a differential diagnosis in the milder cases, in which, after perhaps an attack of the petit-mal type in which there has been simple obscuration of consciousness, for so brief a period as not to have been observed by others, the patient goes on with what he was doing or carries out some plan or piece of business with apparent correctness, and yet afterward has no recollection of the acts.

The following case illustrates this:

A lady, unmarried, æt. 40, had been subject to epileptic seizures for a number of years. Most of her attacks were of a mild type, of which she herself would be absolutely unconscious. On one occasion, while sitting at the breakfast-table in a hotel, she suddenly seized the newspaper of a gentleman sitting opposite and went to her room. She had no recollection of the act, and was surprised to find herself in her room with the paper. On another occasion she transacted considerable business involving the receiving of various sums of money, apparently attracting no attention as to her mental condition and performing her work correctly. Following these transactions, she had no recollection of seeing the various persons from whom she had received the money. Her acts were automatic, although in these instances of a character with which she was perfectly familiar. *There was evidently in her case a dual existence.*

Chorea in Insanity.—Chorea is a disease with a special motor disturbance. Under this head we would only consider the well-known neurosis in which we find motor disturbances, hardly convulsive in character, but marked by a condition of incoordination. We refer to the so-called Sydenham disease in contradistinction to the condition found in defective

brain formation, such as is seen in the imbecile or in cerebral hemiplegia the result of meningeal hemorrhages, inflammatory affections of the cortex, or porencephalus. Here, there are indeed choreiform movements, but the special condition is a mental defect dependent upon structural defect.

Chorea is a disease most commonly of childhood, especially in its acute form; the more chronic form occurs in adults. We also see it during pregnancy with special mental symptoms. Huntington described a form which is hereditary in certain families, associated with marked mental symptoms of the type of dementia.

In children the disease runs an acute course, varying from three weeks to as many months, with a tendency to periodical semi-annual or annual returns. The mental symptoms are those of excitability, instability of temper, and an hysterical condition. There is also a considerable impairment of memory. The patients are excessively emotional, being subject to attacks of laughing and crying, and prone to impulsive acts. Illusions, especially at night, are not infrequent.

We have already referred to the paroxysmal attacks of what has been termed coprolalia and echolalia in which there seems to be an irresistible impulse to the use of profane and indecent language, or again to especial attacks of obstinacy, the child being determined to do what it wishes, often being destructive and violent, in fact maniacal. Chorea occurring in adults, especially in young women, is often violent and uncontrollable, and there is indeed great cerebral excitement, resembling mania. It is usually chronic in its course. A hysterical basis often seems to exist in these cases.

Puerperal Insanity.—We would here include all those mental disturbances occurring during or following gestation. There is, as Morel has well said, no special form of insanity peculiar to the puerperal state. The usual forms are melancholia and mania with hallucinations and delusions, which do not differ from these conditions under other circumstances.

The causes are first heredity, the exhaustion consequent on the condition of pregnancy, fright, previous attacks, illegitimacy, alcoholism, sepsis, etc.

During pregnancy it is common to find unusual conditions of feeling, longings often for special articles of diet. Some

women are cheerful only when pregnant, others again are always depressed. The usual form is that of melancholia with suicidal tendencies. A milder condition resembling hysteria is common. There may be marked aversion to the husband or an irresistible impulse to produce abortion in some way, the most moral and conscientious woman during these periods being absolutely regardless of all moral obligations. It is not unusual to observe almost any of the various forms of the so-called impulsive insanities, such as a tendency to theft or to the excessive use of alcohol; or, again, there may be marked eroticism. This mental condition may pass away at the time of labor, but is more apt to continue.

INSANITY OF DELIVERY is usually of the maniacal type and is probably due to excessive pain (as I have seen in some cases), or, again, to the delay, since many instances occur in a tedious labor. This is more apt to occur in the primipara. There is often during the first few days, before or during the establishment of the flow of milk, a marked maniacal condition, during which infanticide may occur.

INSANITY FOLLOWING SEPSIS usually occurs within a few days after delivery and is associated with high temperature. In these cases we find a maniacal condition as a rule, with muttering delirium, a constant agitation dependent often on hallucinations and delusions.

In *puerperal insanity per se*, not dependent on septic conditions, the onset is usually later, the direct cause is often mental—that is, due to anxiety or worry, or, again, due to physical exhaustion. There is usually an absence of high temperature. We may have mania with great excitement requiring restraint, or there may be marked melancholia in which there may be aversion to the husband and the child. Both these states may pass on into more or less chronic conditions in which delusions of suspicion are common, and impulses usually of a suicidal nature. The majority of cases, however, recover.

INSANITY OF LACTATION is usually of a depressive type. We have melancholia, usually subacute with delusions of self-condemnation and suspicion. There may, however, be acute mania. The cause that is the direct one is exhaustion, so that we find it especially among the weak. I have observed it also especially of the melancholic type, among women who have

suckled their children beyond the usual time in order to avoid becoming pregnant again. This is not an uncommon practice among the poor.

The crime most peculiar to these conditions is homicide. During pregnancy, however, the peculiar longings and desires may manifest themselves by theft, dipsomania, or infanticidal tendencies.

Savage refers to a condition of transitory mania occurring within the first few days after delivery, in which the woman may injure herself or her child, being perfectly unconscious of her act.

This may occur where there has been much exhaustion, or in cases where there has been marked cerebral excitement due to illegitimacy. In puerperal insanity of the ordinary type homicide or infanticide is the most usual crime.

INSANITY AT THE MENOPAUSE is usually of the depressive type, that is melancholia. It is usually subacute in character. The patients become anxious, sleepless, lose interest in affairs, and have a fear of impending evil. They are unable to apply themselves to their ordinary occupation. They feel that their family no longer has any regard for them. They become suspicious, the fidelity of the husband is suspected, intense jealousy of a most unreasonable character may be present. Suicidal tendencies may develop. It is not unusual also at this period to have a complete change in the character of the individual occur. They may become inclined to excessive use of alcohol or other drugs, they may manifest impulsive tendencies to theft, or become erotic. The most constant symptom is, however, that of depression, in which suicide is threatened and may indeed be carried out. They become essentially selfish and demanding, any inattention leading to reproaches of neglect. This may pass into a chronic state of dementia with delusions. There may often, however, be re-establishment of health after a few years.

This condition occurs in men also, but is more rare. There is nothing especially characteristic in the form of the insanity which occurs at this period. It is simply that at this special time of life, when certain changes are occurring in the body itself, the brain is liable to disturbances affecting its integrity. It is therefore a critical epoch in the life history of women.

Insanity of Puberty implies a mental disturbance occurring at an important transitional period of the organization. It is especially liable to take place where there exists a predisposing cause, as heredity or a neurotic disposition. The exciting causes are various—fright, grief, mental strain from overstudy, and as a physical cause, masturbation. It is more frequent in females but not unusual in males. There is almost always a great concentration on the ego, leading to habits of introspection. It may take the form of depression or exaltation. In the former we observe the usual condition of self-condemnation with a marked tendency to suicide. This is often due to the belief that habits of self-abuse have alienated them from God and that forgiveness is impossible. Such patients become suspicious; they think every one is aware of their sin and regards them with aversion. They are subject to hallucinations, especially of hearing, in which they imagine that they are called by the most obscene names, or that they are accused of acts of the most indecent character.

In the maniacal state, which may at times be very violent, they frequently have a feeling of great self-importance, considering themselves capable of carrying out great schemes. These ideas of importance often cover many fields, either in religion, art, literature, or business. They are impatient of all restraint and yet are unable to apply themselves long at any work. Delusions of persecution are not rare.

We observe also in these cases impulsions often of an irresistible character. There may be a marked erotic element present, leading to indecent exposure or open masturbation. In young girls this may lead to indecent proposals, and in the latter we usually find an increase of all these symptoms at the menstrual epoch.

The prognosis is not unfavorable except when there is a bad hereditary history.

The following case will illustrate this condition as occurring in a young boy:

A. B., æt. 17, family history negative. The patient had overworked and over-studied and had always shown himself very ambitious to succeed. His studies had to be carried on at a night school, as he worked by day. He was also a very regular attendant at the church meetings, frequently speaking at the meetings. He suddenly became quite

changed in all his habits, was aggressive and boastful. He no longer went to his work, but claimed that he felt that he could become a great preacher or architect, or in fact anything he wished to try for. He was irritable and at times violent, striking his mother if she did not do as he wished. This condition passed later into one of confusional insanity, in which he seemed to lose all idea of time and place, and in which from time to time he would become excited and destructive. This patient made a complete recovery.

A second case with a not dissimilar history, in which, however, there had been excessive masturbation as the exciting cause, had sexual desires of an unnatural character. He was evidently in great mental distress, and would remove all his clothing and beg the attendants to have relations with him in an unnatural manner. This case also made a good recovery.

Many of these cases correspond to the type of masturbational insanity. However, while we find it present often as an exciting cause, it may again only be one of the symptoms of disease. It necessarily acts as an effective cause in continuing the mental disturbance.

Insanity in Connection with Rheumatism seems to depend on either the high temperature or an overwhelming of the system with the special poison.

We not infrequently observe in articular rheumatism a disappearance of the articular symptoms, and the onset of cerebral excitement resembling acute mania. There may be at the time a very high temperature, usually higher than we find in mania grave. The patient is delirious and is subject to illusions and delusions.

There is, however, nothing characteristic in the mania which occurs in these cases; there seems to be simply a metastasis of the poison from the joints to the brain and its meninges, resulting in excitement and delirium. It is rare that permanent or chronic mental disease results. It is more unusual for depressive conditions to result.

The following case illustrates mania occurring in the course of acute rheumatism, with a fatal ending:

A. R., æt. 35, was admitted to the hospital with acute articular rheumatism. He passed into a state of acute delirium with hallucinations and delusions. The temperature rose at times to 105°, and he died from exhaustion on the fifth day. There was nothing to distinguish the case in its course from acute mania. The autopsy showed nothing but acute congestion of the cortex of the brain.

Gout in its relations with insanity is especially observed in the general diathetic state rather than in the acute conditions. In the former it is usually of the depressive type. It is rare that delusions are present, but there is often a well-marked suicidal tendency. Such patients are suspicious and irritable and there is present a fear of some impending evil. These cases are more liable to occur in advanced adult life, and may be explained on the ground of the general arterial degeneration. A well-defined attack of gout affecting the extremities will often clear up the mental state. Among the young, with hereditary gout, which has never expressed itself locally except in various signs of malnutrition, indigestion, etc., there may be mental symptoms, usually of the nature of melancholia, which have been described under the head of cerebral neurasthenia. There is, however, at times observed in acute gout a metastasis from the inflamed joint to the brain and *vice versa;* its reappearance in the joint may relieve the brain affection. These acute states may assume the form of mania. There is no doubt of the close connection of this condition with the direct overwhelming of the brain itself with the special toxic poison.

Phthisical Insanity.—In phthisis among the insane it has long been noticed that certain mental symptoms characteristic of the disease are present, and, in fact, have a good deal to do with the progress of the disease. For a long time back the hopeful character of this class of patients has been referred to; even after periods of suffering and exhaustion we find them still believing and hoping that ultimate recovery will occur. Perhaps in no other disease do we find this condition so prominently present. Many diseases of different organs, as of the stomach and liver, frequently only of a functional type, will produce absolutely contrary mental states—marked depression, loss of interest in general affairs, hopelessness in regard to recovery—in fact, many of the symptoms are such as we see in the so-called functional psychoses, as for instance mania and melancholia. It is, therefore, not surprising that the ancients ascribed to various organs in the body the seat of diseases of the mind.

In the etiology of insanity, tuberculosis or phthisis has been cited as a prominent factor. In certain families it not rarely results in insanity, or the descendants of the insane may have phthisis. Again, not infrequently certain members of the

family will suffer from phthisis, while others have some form of mental disease. Atavism is also not infrequent.

We have considered in this relation phthisis as a cause of insanity, and phthisis as occurring among the insane. The class of patients in which the first division may be considered will give us the symptoms of disease as seen in the so-called degenerative type of mental disease; therefore it is not infrequent among paranoiacs and those subject to the various neuroses, such as epilepsy, chorea, neurasthenia, hysteria, etc. The second division, in which phthisis is an intercurrent disease in an already established mental derangement, is more frequently found where exhaustion or loss of nutrition is a marked feature, and therefore it is observed in melancholia and dementia from whatever cause. Many writers describe phthisical insanity as a special form of disease, while others, again, maintain that there is no special difference in the symptoms from those generally recognized in insanity.

An examination of patients with phthisis must be carried on with great care, as not infrequently it will run a very insidious course, the mental condition obscuring the ordinary signs of the disease, so much so, indeed, that where phthisis is present and insanity occurs in its course, there is an apparent improvement in the patient. The cough is no longer troublesome, and expectoration is apparently decreased; and so marked is this change that many have held the opinion that the course of the phthisis has been checked by the addition of mental disease. This, however, can hardly be the case. The improvement consequent upon relief of the exhausting symptoms may seem to lead to a general improvement in the patient. Again, some have claimed, for instance, in dementia, that the appearance of phthisis has improved the mental state; but this is probably explained by the rise of temperature causing some increase in the circulation of the blood in the brain, and in that way clearing up the mental torpor. In almost every case, however, when the disease approaches the final stages the course is most rapid; in fact, statistics would lead us to believe that the duration of the disease is shorter among the insane than among the sane. Phthisis is also more common among the insane than among people in general. The idea of improvement of the patient by the intercurrence of phthisis is not to be accepted. Certainly,

as in other diseases, such as typhoid, or in cases of injury or of extensive inflammation, we do notice for the time being an apparent improvement in the mental state, and while these conditions remain active, often in a case of extreme dementia or melancholia, the patient is much more active mentally than previously. On the conclusion of these acute conditions the previous symptoms return with increased severity, and it is evident that there has been no permanent improvement.

The special symptoms ascribable to phthisical cases seem to be those of suspicion; hallucinations and delusions are not uncommon, the tendency being to a morbid state in which the patients, from fear of poison or from suspicion of those around them, refuse to take food or medicine. There is frequently also a suicidal tendency, melancholia being the type of the disease, associated, as we have said, with marked suspicion. Some writers go so far as to claim that all cases which have a well-defined delusion of suspicion are ultimately the subjects of phthisis. In rare instances we find the opposite condition—of grandeur and a general feeling of well-being. We should be suspicious here of general paresis, for it is not uncommon to find among these patients phthisis either as an hereditary taint or as an intercurrent disease. It often passes unrecognized, and in fact the symptoms may run a course in which there is no indication of the existence of the disease until the final stages. Many of these patients continue at their work, or are out and around within a week or two of their death.

A. B. (colored), male, general paresis; family history negative; phthisis of an intercurrent nature, possibly hereditary. As far as the pulmonary disease was concerned, the illness was of only a few weeks' duration. The post-mortem revealed extensive tubercular disease of the lungs. The symptoms were of the usual type of general paresis.

In our present institutions, with the better attention to sanitary arrangements, there is far less phthisis than was formerly seen, the percentage being decidedly lower. The element of hopefulness is not often so frequently seen as among the sane. Strictly defined, phthisical insanity should not be considered as a special form of disease. The character of the hallucinations and delusions is not sufficiently distinctive to properly constitute a special type of insanity. There is this much, however,

in regard to all these cases: in the insane exposure often does not have the same deleterious effect in causing pulmonary or other disease as we find among the sane; but, on the other hand, as all forms of mental disease generally lead to a low trophic state of the body, they are specially prone to phthisis, a proper nidus for the bacillus being ever present.

Periodical Insanity is that form in which attacks of mania or melancholia occur at more or less regular intervals, the intervening periods being free from all mental disturbance. There is nothing peculiar in the attacks, the principal interest is from a medico-legal aspect, in regard to the complete remission of all symptoms during the intervals. Melancholia is more frequent in this form than mania. Clouston, in his description of the disease, includes circular insanity under the same head. In the latter disease we have alternating conditions of melancholia and mania, the first completing its course and often passing without intermission into the second form. There is usually a periodicity in these attacks also; often, as in periodical insanity of melancholia or mania alone, intervals of months or years intervening between the seizures. There is indeed, as I have said, generally a complete return to a normal mental state, but there may be observed some alteration in the character. The person is not precisely the same.

Marcé divides periodical and circular insanity into three forms:

1. *La folie intermittente simple* (periodical insanity). 2. *La folie à double forme*, consisting of an attack of mania and melancholia with a lucid interval. 3. *La folie circulaire*, a form in which the attacks are continuous without an interval.

Esquirol records a case of a merchant, æt. 40, of a neurotic disposition, who each fall, for four years, had an attack of mania, a spontaneous recovery taking place in the spring. This patient ultimately recovered. During the intervals between the spring and autumn he resumed his business.

A case of acute melancholia has long been under my observation, the attack recurring about once a year for the past six years. The onset is sudden, and came on first at the age of puberity. The recovery is always as sudden as the onset. During the intervals the patient, a young lady, returns to her family and resumes her usual occupation.

The prognosis is, as a rule, unfavorable as far as the ulti-

mate cure is concerned, as there is usually an hereditary element present.

Hypnotism is a subject concerning which much has been written for many years. Mesmer, in the Eighteenth Century, brought it prominently before the public, but the evident charlatanry and often fraud which were present in his methods led to the abandonment of its consideration by responsible scientific investigators. Braid, of England, in 1844, in his paper, described the condition most fully—in fact, little of importance has been added to our knowledge of it since. He also first used the name hypnotism. Since that time the subject has been investigated by various writers in France, as Charcot, Marie, Gilles de la Tourette, and others, and in Germany and England by Berger, Senator, Bramwell, and Tuckey. Early in the century surgical operations had been performed with success while the patient was under the influence of hypnotism.

Hypnotism has been defined (Foster's "Encyclopædic Medical Dictionary") as "an abnormal state into which some persons may be thrown, either by a voluntary act of their own, such as gazing continuously and with fixed attention on some small, bright object held close to the eyes, or by the exercise of another person's will; characterized by suspension of the will and consequent obedience to the promptings of 'suggestion' from without." The activity of the organs of special sense, except the eye, may be heightened and the power of the muscles increased. Perfect insensibility to pain may be induced by hypnotism, and it has been used as an anæsthetic. It is apt to be followed by severe headache of long continuance and by various nervous disturbances. On emerging from hypnotism the hypnotized person usually has no remembrance of what happened during its continuance, but in many persons such a remembrance may be induced by suggestion.

About one person in three is susceptible of hypnotism, and those of an hysterical or neurotic tendency (but rarely the insane) are the most readily hypnotized.[1] Charcot regarded it as an "artificially produced morbid condition or neurosis, because there is not, so far as we know, any anatomical lesion, but having none the less its definite laws."[2]

[1] C. J Braid, Month. Jour. of Med. Sci., July, 1853.

[2] Tuke: "Dictionary of Psychol. Medicine."

There are various methods of establishing this condition: the early one employed by Braid, in which the subject is requested to fix the attention on some bright object which is usually placed above the eyes in a position to cause fatigue (Voisin follows this plan), or pressure over the eyelids effects the same result, the suggestion being made repeatedly that they will soon fall asleep, etc. Self-hypnotism is also possible by fixing the attention on some object. The principle is evidently the attempt to place one's self entirely under some one single influence and thus become oblivious to all other surroundings.

Most healthy individuals can with practice allow themselves to be hypnotized; and the reverse is also true, they can prevent it. In some hysterical temperaments, and also in the insane, their inability to fix their attention on any one thing makes hypnotization impossible.

After considerable practice a bright light or a mere nod may be all that is necessary to establish this state. Charcot has described three conditions into which those hypnotized pass: catalepsy, lethargy, and somnambulism. In all three states suggestion is possible, and it is in reference to this latter condition that of late the subject has become of importance in legal medicine. While many acts, often foolish in character, will be carried out by the subject upon suggestion, it is doubtful whether a crime such as murder would be committed. The following cases, which have been reported, will explain the position which hypnotism to-day holds as a ground for defence in criminal procedures.

J. M. Baldwin[1] says, in regard to criminal suggestion, that "cases have been tried in the French courts in which evidence for and against such influence of a third person over the criminal has been admitted. The reality of the phenomena, however, is in dispute. The Paris school claims that criminal acts, which are just as certain to be performed by him as any other acts, can be suggested to the hypnotized subject. While admitting the facts, the Nancy theorists claim that the subject knows the performance to be a farce, gets suggestions of the unreality of it from the experimenters, and so acquiesces. This is probably true, as is frequently seen in cases in which patients have refused, in the hypnotic sleep, to perform suggested acts which shocked their modesty, veracity, etc."

[1] Johnson's "Universal Cyclopædia," 1894, p. 463.

The undoubted fact that such a control is temporarily possible was made the basis of a curious legal defence in the trial of a French woman, Gabrielle Bompard, for complicity in the murder of one Gouffé. At this trial in November, 1890, her counsel endeavored to secure her acquittal by introducing evidence to show that she was an hypnotic subject, and took part in the murder under the hypnotic compulsion of her confederate, Michel Eyraud. The court, however, refused to allow any testimony on this head to be presented.[1]

A very interesting case is reported by A. Motet.[2] The "Chambre des Appels de Police correctionelle" reversed the decision of the "Tribunal de première instance" condemning Emile D. to three months' imprisonment. He had been arrested for indecent acts in a public urinal. D. protested his innocence. Dr. Mesnet, under whose care D. had been in the Hôpital St. Antoine, and who knew him to be subject to spontaneous attacks of somnambulism, with others was able to obtain a new trial, on the ground that D. was irresponsible during these mental states.

The avocat-général, M. Bertrand, said that it was necessary, if D. passed into this mental condition, to prove its existence at the time of his arrest. Permission being granted to hypnotize the defendant, he was asked to undress himself, which he immediately did, but when roused from the hypnotic state, had no remembrance of his acts. The decision was based on the ground of irresponsibility.

I would refer to the following articles on the subject:

"Hypnotism," Moll, Albert, Berlin, 1890. *Juridical Review*, Jan., 1890 (contains trial of Eyraud and Bompard). "Bibliographie des modernen Hypnotismus," Dessoir, Berlin, 1891. *Contemporary Review*, Oct., 1890, "Hypnotism and Crime." A. T. Innes, "Der Hypnotismus in seiner psychol. Beziehung und forensischen Bedeutung," Schapira, Berlin, 1893.

CEREBRAL DISEASES WITH CONSTANT PATHOLOGICAL CHANGES OR ORGANIC PSYCHOSES.

Under this heading fall all those diseases of the brain in which there are mental disturbances, dependent upon definite

[1] "The International Cyclopædia," New York, 1893, p. 763.

[2] Annales d'Hygiène Publique et de Médecine Légale, iii. serie, tome v., Paris, 1881, p. 214.

lesions of the brain and its membranes. In all the other forms of insanity which we have described, with the exception of dementia, there have been no definite changes, outside of impaired nutritional states, whose exact relation to the disease itself it was possible to predicate.

In these organic psychoses, however, we find destruction or impairment of the cells of the cortex, associated with changes in the connective tissue and the blood-vessels, which are amply sufficient to establish a basis for the statement that insanity is essentially a disease of the brain—allowing us by inference to positively conclude that the so-called functional forms of insanity and those dependent on degenerative states are likewise the result of disease of the brain, as the symptoms are similar in character; that is, they consist in departure from the normal reaction of the various faculties of what we call mind, one on the other. Even here, however, all is not clear, for various similar lesions of the brain substance and its membranes may exist without producing mental disease. We constantly see inflammation of the membranes of the brain and the cortex itself, or even destruction of the brain substance by disease or traumatism, which does not result in mental disturbance, so that we are forced to accept the subdivision of this class of insanity, as stated by Krafft-Ebing, as consisting of brain disease, with predominating mental disturbance.

The explanation of this apparent anomaly, that in all cases of disease of the cortex cells we do not get like mental symptoms, remains for the future investigator to give us.

The tendency at present is, therefore, to study the cells themselves in their normal and pathological states, which may finally lead to a discovery of those special cortex cells of the brain which carry on the mental processes, and enable us to differentiate them from those which are the source of motor and sensory function.

The first disease under consideration in this class of organic insanities will be:

Acute Delirious Mania.—Synonyms: Delirium grave; typhomania.

We have to do with a condition in which there is great excitement and violence associated with extreme exhaustion and a high temperature.

It differs essentially, therefore, from any other form of in-

sanity in that we have associated a high temperature. Acute mania, as described under our heading of functional psychoses, bears no resemblance to it in its clinical course, it being essentially a non-febrile state, even the greatest amount of violence rarely leading to an elevation of temperature of more than a degree. The marked degree of exhaustion, the evidence of some real illness being at the back of the delirious state, is not present in ordinary mania. As in the latter, there is frequently present an appearance of great vitality, at least in the early stages. The course of the disease is essentially different, death usually occurring within five to ten days. It suggests from the beginning some severe febrile state, due to some cause of infection. We have to do with a distinct disease, an entity, and not, as suggested by Régis, a higher degree of mania.

Acute delirious mania is essentially an acute disease of the brain, characterized by high temperature and extreme exhaustion, accompanied by hallucinations of sight and hearing, and delirium.

The causes are predisposing and exciting. Among the first is hereditary tendency or a neurotic, unstable disposition. It is usually a disease of adult life from twenty-five to fifty, and affects both sexes about equally. Women at the climacteric period are especially liable to it. It is, however, one of the rarer forms of insanity. Extreme exhaustion from overwork, especially of a mental character, shock from domestic and financial losses are exciting causes. It may follow or accompany typhoid fever or pneumonia or rheumatism. It is, as Bevan Lewis well says, a disease especially marked by the rapid disintegration, both mental and physical, of the patient.

The onset of the disease may be and usually is sudden, marking itself by acute delirium in which hallucinations are present. The patient requires restraint. This may be preceded by symptoms of a mild character, as of irritability, sleeplessness, and headache. In the early stages of rheumatism and miliary tuberculosis passing into acute delirious mania, the mental symptoms may entirely obscure the physical signs of the disease. The patient soon passes into a low muttering delirium and is unconscious of his surroundings, with no after-memory of the passing events. There seems to be a feeling of terror, and fear with a desire to escape; the face is flushed, the pupils con-

tracted or dilated, and the body bathed in a profuse perspiration. There is from the first rapid wasting; the tongue is dry and coated and the pulse frequent and small.

There is every sign of extreme bodily illness. The temperature from the beginning is usually high and continues to rise to 105°–106° before death. The course of the disease is rapid, death usually resulting within five days. The emaciation may be extreme despite the constant feeding. Recovery at times occurs, leaving little after-effects, although there may be dementia.

The post-mortem changes are often very inadequate to explain the violent class of symptoms which have passed over the patient like a storm. There is usually evidence of excessive hyperæmia, which probably at this time is less marked than *intra vitam.* Krafft-Ebing considers the changes essentially due to hyperæmia followed by venous congestion. There is usually considerable increase of the cerebro-spinal fluid, the brain substance appearing œdematous. The cortex is found to have a rosy appearance from the overfilling of the capillaries. The pial vessels are marked by white lines, probably due to stasis in the accompanying lymph tracts. The cortex cells are usually involved and show evidence of disintegration.

It would scarcely seem probable that such changes could presage the beginning of general paralysis, although this has been noted by some writers.

The general distinction of this disease from the other forms would seem evident. From delirium tremens the absence of fever in the latter and the absence of the extreme exhaustion are sufficient. Should it, however, be complicated by an acute disease, such as pneumonia or meningitis, it is more difficult to make the diagnosis.

The following case, which proved fatal in three days, and in which an autopsy was obtained, typically represents the disease:

R., laborer, æt. about 35, was admitted to the hospital November 19th, 1893. During the night of admission and the following day he was very delirious and had to be restrained. He was at no time conscious of his surroundings nor could he be aroused to give his name. He was constantly talking in an unintelligible manner and at times became very violent, calling out as if in great fear. There was constant twitching of the extremities, but no convulsions occurred at any time.

The temperature never rose above 100° until November 21st, the respiration being between 9–12. On the 21st the patient passed into a state of low muttering delirium, becoming angry and combative when disturbed. The following is the chart taken at that time:

	Temperature.	*Respiration.*	*Pulse.*
9 A. M.	100°	18	100
1 P. M.	100°	15	104
5 P. M.	97°	16	100
9 P. M.	99°	18	104
1 A. M.	100°	22	112
5 A. M.	102°	28	126

Death occurred 8:45 A.M. on the 22d. Toward the end there was a constant rise in the temperature and increase in the pulse and respiration.

The autopsy showed the calvarium adherent over the convexity. The pia was raised up from the cortex by a serous effusion, and there was evidence of marked capillary congestion of the cortex.

General Paresis.—Synonyms: General paralysis of the insane; *Paralysie générale, méningite chronique avec aliénation; periencéphalite chronique diffuse.*

It is a chronic disease, as the various synonyms given indicate, in which there are both mental and physical symptoms present.

The mental symptoms are those which most particularly interest us in a medico-legal sense, and they are rarely absent, although in some few cases, outside of a certain degree of dementia, they may be subordinate to the physical or somatic signs of the disease.

It is essentially a disease of the fully developed brain, coming on in adult life, usually between the ages of twenty-five and fifty, although some cases in childhood, especially where there has been an hereditary history of syphilis, have been reported, and again in some instances it has occurred after the age of seventy. The course of the disease is a chronic one, extending usually over a period of two or three years, but it may terminate in a few months, and in certain irregular cases, especially where the somatic symptoms are more prominent than the mental, extend even to fifteen years. It is a disease of modern life and affects men more frequently than women, although of late years it is found much more frequently among women than formerly. This may be explained by the increased anxieties

to which the latter are subjected in the more active part now assumed by them in business relations and the various professions.

Heredity is, as in all forms of insanity, an important element in its causation, it being present as a factor in about thirty-three per cent. of all cases. It is rarely directly inherited, but usually occurs in those whose antecedents have a history of epilepsy, chorea, alcoholism, phthisis, or in which the children are the products of old age or in families in which consanguinity in marriage has existed. Syphilis is perhaps the most important exciting cause, it being claimed by many writers that it always exists as the basis of every case. This is, however, probably not true. Among other exciting causes is found mental worry, especially when of a financial character, or even the struggle for existence. This is observed where certain races as the negro, the Chinese, etc., come in contact with a higher civilization, although in their own native surroundings the disease is very uncommon. Excesses of any nature, overwork, alcoholism, venereal excesses have an active part in its causation, so that we commonly find the disease among the professional classes, as lawyers, clergymen, physicians, brokers, merchants, and actors. It is not, however, confined to any class, affecting the highly educated and the ignorant. It is a disease of the brain characterized by a more or less rapid disintegration, associated with inflammation. It is this latter condition which supports the theory of a syphilitic origin of the disease, which is in fact present in the majority of the cases. However, I feel convinced from careful study of many cases, both in hospital and private practice, that in not a small proportion of such patients that element can be excluded.

The course of the disease is generally described as passing through certain stages, but this is for convenience only, as there are no well-defined periods during the progress toward its always fatal ending. In fact, there are often remissions in which, at times, recovery seems to have taken place. Especially is this observed when the patient is removed from the excitement and strain of ordinary life to the quiet and regular existence of hospital care. The course is rapid or slow also, depending on the frequency of epileptic seizures, one of the common symptoms of the disease. When these are present to a marked degree, there

seems to occur a rapid disintegration of the mental faculties and a tendency to physical exhaustion terminating in death.

The onset of the disease is rarely sudden, although it may appear so, as the first indication of the disease to the friends may be some extravagant act, either in social or business relations. Usually, however, if the patient has been closely observed, some change in the personality will have been noted. At times a condition of depression may precede the actual outbreak of the disease, or there may be some excitement expressed by irritability or obstinacy, or again in somatic symptoms, as apoplectic or epileptic seizures, or an attack of aphasia lasting a few hours or days. These prodromal symptoms are usually only remembered after the thorough establishment of the disease.

In a medico-legal aspect, according to Legrand du Saulle, general paralysis may be divided into four distinct periods, a short summary of which I will give, although the pathology of the disease does not sustain any such artificial division into periods.

1. "*Période prodromique*," or prodromal period, in which, while many irregular mental or physical symptoms may be present, they cannot be distinctly recognized as characteristic of the disease except in the light of its future development. There may be indeed for several months, or even years, a combination of characteristic phenomena, as one or several apoplectic attacks with loss of consciousness and passing paralysis of the arm or leg, or temporary aphasia. More important is the change in the personality. There is often an exaggeration of former tendencies. There is usually extreme irritability, or again depression. There is also, even at this period, an impairment of the memory and an evident inability to perform the usual work, even that of the most routine character. About this period there will now appear the feelings of self-satisfaction and expansiveness which really usher in the so-called—

2. "*Période initiale*," or initial period of the disease. This is usually expansive, showing exaggeration of the ego, but may at times be depressive, the patient apparently recognizing his mental condition. The *délire des grandeurs* is, however, far more frequent. The sense of well-being is thoroughly established at this period—a feeling of power and ability to do,

entirely at variance with the actual mental weakness. There is an exaggerated idea of wealth and strength. It is at this period that speculations of the wildest character may be undertaken. In the depression there is constant dread of approaching ruin; a belief that acts have been committed which have dishonored them. There may at this time be a cessation of the progress of the disease, or else what may appear as a recovery, but there is sooner or later the establishment of the full physical and mental signs of the disease in the so-called—

3. *Période d'état*, which continues for months, passing into the stage of complete dementia, *i.e.*, the fourth stage, or

4. *Période terminale.*

The age and social condition of patients with general paresis is shown in the report furnished me by Dr. Louis C. Pettit, of the New York City Insane Asylum, of one thousand and six cases:

AGE AT DEATH IN ONE THOUSAND AND SIX CASES OF PARESIS.

Age.	Cases.	Single.	Married.	Widowed.	Age.	Cases.	Single.	Married.	Widowed.
21	0	0	0	0	48	27	7	17	3
22	1	1	0	0	49	20	1	19	0
23	2	0	2	0	50	48	6	39	3
24	1	0	1	0	51	20	5	12	3
25	13	5	7	1	52	19	4	14	1
26	9	8	1	0	53	22	3	18	1
27	7	5	2	0	54	14	3	7	4
28	14	5	9	0	55	25	3	17	5
29	17	3	13	1	56	17	2	13	2
30	22	13	9	0	57	5	1	4	0
31	21	3	17	1	58	17	4	11	2
32	32	14	18	0	59	6	2	4	0
33	24	13	11	0	60	16	2	13	1
34	27	4	23	0	61	4	0	4	0
35	58	15	38	5	62	6	1	4	1
36	38	7	27	4	63	4	0	3	1
37	37	14	23	0	64	6	1	2	3
38	42	16	25	1	65	5	0	4	1
39	24	4	19	1	66	7	2	4	1
40	70	14	53	3	67	0	0	0	0
41	34	6	28	0	68	3	0	3	0
42	46	12	32	2	69	4	0	4	0
43	25	7	15	3	70	0	0	0	0
44	32	8	21	3	72	1	0	1	0
45	52	9	42	1	79	1	0	0	1
46	28	5	21	2					
47	33	4	27	2	Total	1,006	242	701	63

Convulsions 387. Syphilis 117.

It is possible for the prodromal period referred to, in which there is evidence of change of character and great irritability with a tendency to exhibitions of anger or violence, which at this time is often bitterly repented of, to extend over a number of years. The actual establishment of the disease is marked intellectually by the absence of all feelings of regret for their acts and the natural feelings of anxiety or even interest in their personal affairs. A fatuous state of contentment takes its place, a belief that mistakes will be made right in some way. Habits of extravagance are established; purchases of articles of every variety, often useless in character, are made; enterprises are entered into, houses built without regard to expense. The formerly temperate man may order large quantities of wine, and during periods of excitement, which are often paroxysmal in character, may be subject to excesses in drinking.

Appropriation of money or property may take place, due to the expansive ideas of the patient, his belief in his great wealth or his numerous plans causing him to utterly disregard the rights of others. It is at this period, therefore, before the condition has been recognized by those with whom he comes in contact, that questions of medico-legal interest may arise. It is important to recognize this early stage before fortunes are dissipated and the family disgraced. The mental change from the previous condition is, therefore, of primary importance. At this period, also usually accompanying or following close upon the intellectual impairment, appear bodily conditions which are as positively diagnostic of the disease as those affecting the mind. There is usually at an early stage more or less tremor of the muscles of the face, especially of the muscles of the mouth and the folds of the cheek, and also of the tongue. The speech becomes thus secondarily affected and is slow and clumsy—the ideas may flow rapidly, but cannot be enunciated clearly. There is not true aphasia, and there is no loss of memory of words, but there is marked inability to coördinate the muscles necessary for articulation. There is also some actual paresis of the muscles of the face, giving a characteristic blank and fatuous expression. The pupils are also soon involved, showing inequality, and slowness of response to light, but retaining the power of accommodation; later there is often permanent dilatation or, more rarely, contraction.

Again at this early stage, though more rarely, there may be epileptic seizures at considerable intervals of time apart, or apoplectic seizures with hemiplegia rapidly recovered from, or true aphasia of a transient character. This latter disturbance of speech is entirely distinct from the slow, clumsy speech previously referred to. We now recognize symptoms dependent upon disease of the spinal cord, as tremor of the hands, manifesting itself in the writing or in any delicate work, even in dressing. There may also be marked ataxia of both the upper and lower extremities, with loss or exaggeration of the reflexes. Accompanying all these mental and physical symptoms of disease, as an undertone, there is usually a constant feeling of well-being, already referred to; the patients are always feeling well, and this even continues to the final stage of dementia. There may be increase of the sexual appetite; in this early period it being often regarded as the cause of the disease when in reality it is a symptom; or again we may have the reverse condition. No disease shows such complete wrecking of all that can be called man in his moral and intellectual characteristics as general paresis. Paroxysmal attacks of mania of great violence, usually destructive or homicidal, may occur. It is at this period that remission may occur, or at least the disease may remain stationary for months or even years.

The so-called third stage simply emphasizes the symptoms already detailed. The aphasia becomes more marked, until the speech is almost unintelligible, and the ataxia and paralysis increase, so that the patient is confined to his bed, unable to feed himself. The delusions of grandeur and hallucination continue, and still the absolutely helpless patient may express himself as never having felt better in his life.

Epileptic seizures are at times very frequent, continuing for hours, and are usually of the clonic type, without loss of consciousness. These are dependent upon the meningitis, and are often the direct cause of the death of the patient from exhaustion. They have a great influence in increasing the dementia Apoplexies may cause paralysis, or when occurring, as they at times do, in the parietal and occipital regions of the brain, cause mind blindness, that is, a loss of appreciation of what an article is, or its use; or again word deafness and word blindness. These conditions are usually temporary.

The final dementia may be complete, but death usually results from exhaustion or some intercurrent disease, as pneumonia, before it is reached.

The course of the disease as described is the usual and typical one; there are, however, many variations which occur in its onset and course. It is always fatal. The remissions, however, in some cases are often of long duration, for a time making the diagnosis subject to question.

In certain cases again, when the physical signs of the disease are well defined, but the mental are not so well developed, there may be considerable difficulty of diagnosis, especially as this class may continue long beyond the usual term of the disease. Again in the so-called spinal type the early affection of the cord, with the extension of the disease to the brain, may make it at first difficult to give a positive diagnosis.

The first class is well illustrated in the following case:

A. B., lawyer, æt. 34; family history negative. Patient had contracted syphilis in early life. Married and had several healthy children. Exciting cause of disease, financial anxiety, overwork, and grief from domestic affliction. It was recollected that for two or three years previous to my examination of him, he had become very irritable and liable to outbursts of anger, his natural temperament being mild and agreeable. This was, however, ascribed to his business anxiety and insomnia. The first symptom ascribed to mental disease was a transient attack of aphasia, lasting a few hours. This was followed a few months later by a second attack, after which there seemed to be a permanent change in his disposition. He no longer had any anxiety in regard to his business, neglecting to appear in court at the time of trial, but expressing no regret for it. He became placid and contented, sleep and appetite improved. Memory for present wants became very defective, but he would relate with full details events occurring within the last few years. Was perfectly able to carry on accurately the routine business of his office. At no time did he have any delusion of grandeur or any expansive ideas. Became rather careless at times in money-matters, but at no time extravagant. His speech became slow and clumsy, and from a brilliant, rapid talker in court, he at times became almost unintelligible. Such catch-expressions as "Around the rugged rocks the ragged rascals ran," were impossible to him. There was considerable tremor of the several muscles of the face, and that characteristic flat, fatuous expression of countenance peculiar to general paresis.

He at times is subject to maniacal attacks, in which he has struck his wife and children; these are soon over, and he has deepest repentance for his acts. As a rule he is docile and easily forgets any ill-feel-

ing. Has at no time had any convulsive seizures, or been subject to hallucinations or delusions.

He has relinquished all business, and although regularly going to his office and remaining the usual time, seems to have no appreciation of the fact that he is doing nothing.

Is emotional, a sad story causing him to burst into tears, but is generally in a happy and self-satisfied condition of mind. The disease has now lasted, with very little change except a slowly increasing dementia, for five years, which, with the previous two or three years which were a part of the disease, makes its course at least seven years.

In this form the physical signs of the disease and dementia are the prominent symptoms. Another patient's history extended over fifteen years.

The onset was gradual and unexpected, the symptoms being altogether of a spinal character. However, he had still earlier delusions of an expansive character, which had resulted in speculation which involved him in financial ruin. During the last eight years of his life, while under my observation, he had no delusions. He was always happy and expressed himself as perfectly well. There was, however, a progressive dementia, interrupted at times by attacks of maniacal violence, in which he had an intense desire for alcohol.

Complications.—Among the special complications peculiar to this disease is often the very early condition of failure or loss of appreciation of moral, ethical, and religious questions, so that we notice men and women commit acts opposed to the ordinary customs of society, often in public, without apparently any appreciation of their heinousness or any regard for the feelings of others. Combined with this there is more or less confusion of ideas, especially in regard to the rights of those around them, whether in reference to their comfort or to their property. Perhaps one of the most important signs of dementia which manifests itself even at an early stage is to be found in this direction. Long before there is any marked failure of mental power, as shown in the occupation or daily relations of life, this partial confusion of the proprieties is seen and here it is of importance to recollect that this symptom may long remain unrecognized, and probably is the premonitory sign of the disease itself. It may take the form of extreme nervousness, or of despondency, or again of irritability, or lack of consideration for others, whether in regard to their opinions or their rights. A

case under my observation first presented all the conditions common to neurasthenia and general nervous exhaustion, with inability to attend strictly to business. There was marked hypochondria with reference to the sexual organs, and the constant fear that he had contracted some imaginary disease. This was followed, much to my surprise, in the course of a year and a half, by all the characteristic phenomena of general paresis. In this case there has been no history of syphilis, but excessive worry in regard to business, and his apparent appreciation of his inability to carry on his business with his former success seemed to be the exciting causes of the disease. A change in his condition, which was noticed by his physician, was supposed to be the beginning of improvement on his part; it was, however, the beginning of the mental derangement which is common to general paresis. At this time he began to see only the pleasant side of things, and to form great plans about his business, and he seemed to have no longer any fear of failure in his enterprises. The extensiveness of his schemes, with their impracticability, drew the attention of his business friends to his mental state, and when utterly unable to go to business, or to speak intelligently or connectedly about his business, he was as much over-sanguine as he had formerly been despondent. Few cases, however, apparently have this prodromal stage, most of them showing first more or less mental excitement, rather than a prolonged condition of general nervous ill-health.

The differential diagnosis may require to be made at times from alcoholic dementia—a fuller description of which will be given later—from syphilitic disease of the brain, from acute mania, and from paranoia, where there may be ideas of grandeur not dissimilar from those found in general paresis. The ambitious ideas of paranoia may offer special difficulties at first in the way of diagnosis. Intra-cranial growths are not likely to lead to errors in diagnosis. Disseminated sclerosis is at times most difficult to distinguish from it; but here we have the marked tremor, the nystagmus, the peculiar speech, and the rigid and almost spasmodic condition of the lower extremities, to aid us in making the diagnosis. Both diseases may occur at an early period of life, the disseminated sclerosis as a rule somewhat earlier than general paresis. In a few rare cases, general

paresis is found among elderly people, and under such circumstances it may be difficult to differentiate it from senile dementia. In a case which I had under observation, a patient with strong religious ideas began to develop considerable excitement and irritability on account of the opposition to plans which he had devised for the union of all religious denominations. There was marked tremor, and also inequality of the pupils, and evident signs of exhaustion. It looked as though the disease would progress rapidly, but on removal to an asylum, the routine of the institution and the proper regulation of the diet and of all his actions, along with the needed rest, led to marked physical improvement. The case is still under observation, and it is probable that it will again progress rapidly as soon as the effect of the change in the patient's surroundings has passed off. From ordinary epilepsy and apoplexy there should be no difficulty in differentiating the disease.

In legal relations general paresis comes very often in question. Especially is this seen in the early stages, before the disease has been actually suspected. The extravagance in expenditure may make it necessary to inquire into the mental state of the individual. Again the question of responsibility for theft committed (which is not unusual in this disease), or malfeasance in office, or the care of moneys or estate may arise, or even offences against decency, for erotic tendencies are not uncommon in the early stages of the disease. As we have seen, maniacal attacks with homicidal tendencies may also occur.

Remission simulating complete recovery often comes into question. There is no true remission in this disease. The later stages of the disease are so well defined that the question of responsibility can scarcely arise. I would refer here to the following case in which the probate of a will was contested:

Will of Kiedaisch, 13 N. Y. Supp., 255.—Contested probate of a will. Testator was confined to an insane asylum in 1886 as being afflicted with general paresis. In 1887 he was taken out, and in 1888 married the proponent. It was not objected that he was incompetent to marry, and the will was executed shortly after; in 1889 he was again confined to the asylum, where he died in 1890. During the time he was not confined to the asylum he transacted business. The testimony of experts was conflicting. Held, that the testator was competent to make a will.

The following cuts illustrate the facial expression in general paralysis, which is as distinctive as the mental symptoms themselves:

FIG. 25.—General Paralysis during Period of Excitement.

A. B. (Fig. 25), æt. 35, male. Patient had all the characteristic symptoms of believing that he possessed great wealth and delusions of grandeur. Death occurred about three years from beginning of the disease. His brother died in another institution of the same disease, just preceding the time of his death.

A. B. (Fig. 26), female, æt. 44. In this case very few mental symptoms except dementia were present, and the diagnosis remained some time in doubt. The physical signs were, however, well defined as the case progressed. Marked tremor of the face and tongue and loss of facial expression. The speech was slow and clumsy. Epileptic seizures were frequent, one passing into the other, and were chronic in character. Death followed one of these seizures.

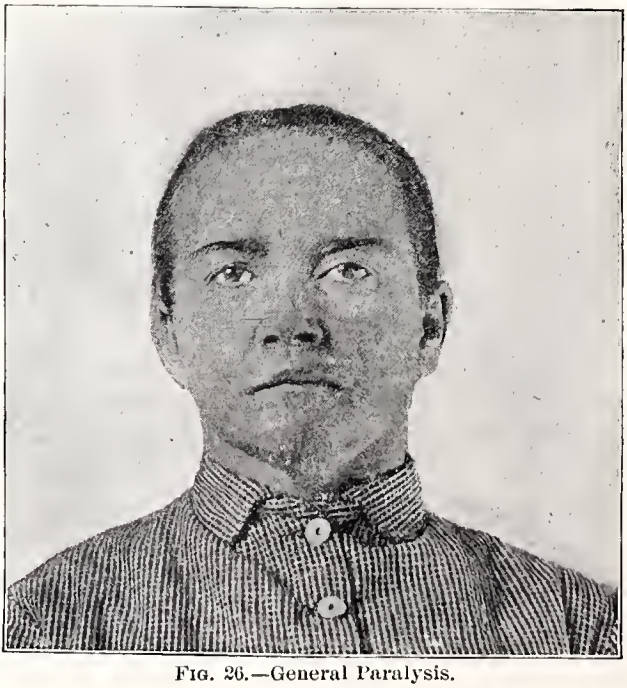

FIG. 26.—General Paralysis.

Syphilitic Insanity is cerebral syphilis with predominating mental symptoms.

It depends on disease of the cerebral vessels, which may be partially or completely occluded. We find gummatous infiltrations in the walls of the vessels and usually an affection of the membranes of the brain. The usual situation of the meningitis is at the base of the brain, extending into the cord, so that we have a diffuse cerebro-spinal meningitis, which usually involves some of the cranial nerves, especially the third nerve. The meningitis may affect the convex portion of the brain, especially the frontal lobes. Again there may be gummata, single or multiple, which, by their special situation, may cause epileptic seizures.

The disease presents many symptoms resembling those found in general paresis. Again the acute psychoses, as melancholia and mania, may arise. The general tendency of the disease is toward dementia, usually progressive in its character. Not rarely, however, dementia, acute in character, may arise, in which the individual may become unable to recollect his own personality, or recognize his surroundings. This is probably due to anæmia of the brain dependent upon the circulation, and is more apt to precede any localizing symptom such as paralysis or convulsions. This was well illustrated in the following history:

C., æt. 42, a traveller for a New York house, while in Chicago became suddenly demented and was arrested in the street, being unable to give his name or address. He was taken to his home by friends and remained in a stupid, half-maniacal state for some weeks. Under special treatment for syphilis his mental state entirely cleared up. Spinal symptoms developed later, which were without doubt due to syphilis, from which he died.

The special symptoms of cerebral syphilis are headache, usually nocturnal, paralysis, usually hemiplegic in type and accompanied by aphasia, and not infrequently epileptic seizures either unilateral or general. The paralysis may be entirely recovered from, according as the artery has been the seat of a complete thrombosis or a partial one. The paralytic attack is not infrequently followed by a second one, or a third, and may be on the same side as the previous one, or on the other side of the brain. Associated with this we may have a paralysis of the

third nerve, causing a paralysis of the upper eyelid or ptosis, and inequality of the pupils, which are usually very slow in reaction to light, and often irregular in outline.

There may be marked tremor, especially of the tongue and hands or even of the face. The speech is often affected, but differs from the clumsy, slurring speech of general paralysis, being that resulting from paralysis, and usually accompanied by some loss of the names of articles. The reflexes of the paralyzed limbs are always exaggerated. The mental state is one usually of dementia, the memory is impaired, and at times there may be attacks of coma lasting for hours or even days. The prognosis is not altogether unfavorable. The mental disturbance may entirely disappear, and even the paralysis if the lesion has not been too severe. There is often considerable difficulty in making a differential diagnosis in some of these cases from general paresis. However, delusions are rare, and it is unusual to find ideas of grandeur and wealth. The apoplectic seizures with paralysis are more quickly recovered from in general paresis, and the localized symptoms are rarely as well defined in the latter. Such cases, however, in general paresis, in which the physical signs of the disease are alone present or only accompanied by a slight dementia, may make it almost impossible for the time being to make a diagnosis positively. The general course of general paresis is, however, as we have seen, comparatively rapid and always ends fatally.

In a legal sense these cases are often of great importance, especially in regard to testamentary capacity. Improvement, which would only imply a remission in general paresis, and no actual abatement of the delusions or of the dementia, would mean in cerebral syphilis a return or restoration to complete mental power, and, therefore, the right to resume control of the person's own affairs or property.

Alcoholic Insanity.—As an etiological factor alcohol enters largely into the production of various forms of insanity. We find it frequently associated with other causes in producing general paresis, mania, etc.

We have two conditions, however, to consider in alcoholism which by their course or class of symptoms mark themselves out as peculiar to alcohol, viz., acute and chronic alcoholism. In the first condition we have symptoms which are especially

characteristic of mania. It is usually due either to the excessive ingestion of alcohol or may occur after its withdrawal. This may be involuntary on the part of the individual, as the stomach may no longer be able to retain it. There is also much exhaustion associated with the withdrawal of the alcohol, as usually during these alcoholic excesses very little food is taken.

A neuropathic disposition inclines especially to the production of this excitable state, or a previous injury of the head. In the latter cases a small amount of alcohol may be sufficient to induce mania. The course is, however, brief in these cases, and is not associated with many of the physical signs of the disease, as tremor, etc. We make a distinction here between delirium tremens and acute alcoholism in our description, which may indeed be partly artificial, but at the same time seems important.

The patient is excitable and often violent, desirous of shouting and singing. In the majority of the cases we find a condition of great mental excitement continuing for days or weeks after the withdrawal of the alcohol, in which the patient is very loquacious, and subject to hallucinations, illusions, and delusions. He wanders from one subject to another, speaking rapidly but incoherently. The hallucinations affect both sight and hearing; he converses with friends as if they were present and he saw and heard them.

There is considerable confusional dementia present, all idea of time and place being lost at times; any recollection of how he was brought into his present place being absent. There are many subjective sensory disturbances leading to illusions, as of creeping insects or animals being present. This may have its cause in a neuritis, commonly present in these cases. In extreme instances there may be an absolute paralysis involving the lower and secondarily the upper extremities, dependent upon disease of the peripheral nerves. This latter condition is often present in alcoholics without the presence of mental symptoms, but the association of the two conditions is not rare.

There is associated with these acute conditions a marked tremor affecting the extremities, especially the hands, and also the muscles of the face and tongue. This may resemble very closely the tremor of general paralysis, and if the excitement is associated with delusions of a boastful character,

which is not rare, may make the diagnosis for a time difficult. The physical condition, however, shows much more vasomotor disturbance, and there is usually a tendency to marked perspiration. There may be also epileptic seizures, which makes the diagnosis still more confusing. The comparatively rapid improvement, however, after the withdrawal of the alcohol soon removes all doubt in these cases.

In an article entitled "Mental Symptoms in Alcoholic Multiple Neuritis" I called attention especially to the mental symptoms of these cases. The symptoms differ somewhat from those found in so-called chronic alcoholism or alcoholic dementia. The following case illustrates it, and also shows the possibility of complete recovery:

A. B., female, æt. 30. Subject to periodical alcoholic excesses, not, however, of the form of dipsomania. Was brought to the hospital with complete paralysis of the upper and lower extremities and suffering from exquisite pain on pressure over the nerves and muscles of the extremities. Patient was unable to state how she had been brought to the hospital or by whom, although not at the time under the influence of alcohol in any degree. Was unable to state the day of the week, nor did she have any idea of time. Patient answered ordinary questions rationally, but would forget the next hour or day that she had spoken of the subject. There was no other delusion or hallucination of any kind. This condition continued for a year, a complete recovery of the paralysis occurring and a gradual but absolute mental restoration. The intervening year, however, always remained a complete blank.

This latter class of cases is much rarer than the former, with mania and delusion.

The pathological changes are often distinct and well defined. We find a multiple neuritis involving the peripheral nerves, and the brain shows evidence of degeneration of the cortex cells and the associative fibres. There is usually also a considerable increase of the cerebro-spinal fluid.

These conditions may be completely recovered from or may pass on to the chronic changes which come under the head of alcoholic dementia.

Chronic Alcoholism or Alcoholic Dementia is a condition characterized by a progressive dementia associated with special delusions, especially those of suspicion.

The etiology of these cases is usually the constant and exces-

sive use of alcohol, with periods of more or less prolonged debauches. We have, therefore, some of the symptoms of acute alcoholism just described associated at times. The chronic alcoholic becomes incapable of carrying on business, in fact loses all desire to do so; his memory is defective, and he loses all the higher qualities of his ethical nature. He is subject to delusions of persecution and believes that people are conspiring against him. Delusions of hearing are common; he hears the voices of his enemies talking against him, threatening to kill him, etc. Visual hallucinations are also present. Circumstantial accounts of assaults and often robbery, with details founded on delusions, may be given which have absolutely no foundation in fact. On the other hand the individual may accuse himself of acts homicidal or otherwise, which were clearly not committed.

One of the commonest delusions of suspicion is that of the infidelity of the wife or husband, as the case may be.

These delusions may lead to acts of violence, homicidal in character. As the dementia progresses there is often a fixed delusion in regard to these acts. It is not rare to find a patient assert, with full belief in his statement, that he has been at a certain place and met certain persons and transacted business, when it is known that he has not left the house for weeks.

He may be unable to recognize his surroundings, not knowing that he is in his own house, or may be unable to state the time of the year or week. There are, however, marked changes in the course of the symptoms, depending on the amount of alcohol consumed. The physical signs show tremor and much muscular weakness, and at times epileptic seizures, which may be followed by mania or melancholia.

The course followed by the law is that alcohol is no excuse for crime except where a distinct mental disease is induced as the result of the alcohol. In commitments care must be observed, as recovery from the delusions is often rapid when the alcohol is removed, and litigation for damages may result. There are laws at present regulating the confinement of women in certain institutions for a year, which relieves the physician and friends of the responsibility.

The dementia in chronic cases has a tendency to remain permanent, even after the removal of all opportunities of obtaining alcohol. The pathological changes in these cases are definite

and well defined. We find a chronic pachymeningitis, often associated with meningeal hemorrhage and a degeneration of the cortex cells and association fibres. There is also cerebral atrophy with increase of the cerebro-spinal fluid.

The following cases will illustrate the condition described:

A. B., male, æt. 43. Family history negative. Always of a neurotic disposition. For the past ten years has been an excessive drinker, especially at night, when he would take large quantities of gin. B. has had several attacks of delirium tremens, and also gives history of several epileptic seizures. On examination found patient fairly well nourished, but there was marked tremor of the muscles of the face, tongue, and hands, so that his writing was scarcely intelligible. B. had an epileptic attack at the time, remaining more or less confused mentally for two hours. Memory was very defective—could not play a game of whist intelligently, although thoroughly well acquainted with the game. The question which arose in this case was his ability to transact business and his responsibility for his contracts. The partnership was annulled on these grounds. There were at no time any delusions, simply a dementia being present. Under care and the withdrawal of the alcohol, marked improvement followed.

A second case, in which the question of the ability to manage her own property arose, is as follows: Mrs. B., æt. 65, has been addicted to excessive drinking for years, for which cause she is separated from her husband.

The patient is naturally a very shrewd person and capable of transacting business of extensive proportions, when not under the influence of alcohol.

After excesses she becomes maniacal and has delusions of being assaulted and robbed. She constantly hears voices speaking against her, calling her indecent names, and threatening to kill her. Has illusions of persons around her saying they assaulted her. After an unusually prolonged debauch, in which she had fallen and injured herself, she ascribed her injuries to an attack by these persons.

Her story was that they had entered her house, seized her by the hair, and robbed her of a large sum of money, which they knew she carried about her. This delusion, which she held after she was no longer under the influence of alcohol, was described with full details of the assault. Even during her relation of it, however, she would call attention to the voices in the room above, talking against her. Any sound was interpreted as evidence of a conspiracy. Under care, however, all these delusions disappeared.

Many cases similar in character can be recorded, in which the delusion of suspicion and conspiracy is associated with that

of the fear of being poisoned or of losing their property. This may lead to certain acts to avoid the impending ruin as seen in the case reported by Simon:

A well-to-do business man, addicted to excessive alcoholism, imagined that he was becoming poorer every day, and that his neighbors reproached him for the most necessary living expenses. He set fire to his house, to avoid the complete financial ruin. This patient ultimately recovered.

This writer states that an irresistible impulse may often exist in these cases and that homicides most often committed by chronic cases, are the result of these impulses. In my opinion these acts are usually the result of the hallucinations or delusions.

The question of responsibility is often a difficult one. Rossi, Ortolan, Helie are in favor of allowing extenuating circumstances in all cases of intoxication. As Cullere says, "a distinction must be made between the individual who resorts to alcohol for the courage to carry out an act or crime, and he who in unforeseen intoxication or in alcoholic delirium commits an illegal act. In case of drunkenness the expert must study exactly the habitual mental state of the individual, his hereditary tendencies, the moral or emotional shocks which may have shaken the stability of his nervous system."

"Although drunkenness in itself is no palliation or excuse for crime,[1] yet mental unsoundness, superinduced by excessive intoxication, and continuing after the intoxication has subsided, may excuse; or when the mind is destroyed by long-continued habit of drunkenness, or where the habit of intoxication caused an habitual madness; and where a person is insane at the time he commits the crime, he is not punishable, although such insanity be remotely occasioned by undue indulgence in spirituous liquors, or from what, in a moral sense, is a criminal neglect of duty. For if the reason be perverted or destroyed by a fixed disease, though brought on by his own vices, the law holds him not accountable. But temporary insanity, resulting immediately from voluntary intoxication, does not destroy legal responsibility, or constitute a defence for crime; but when the question is, whether a murder is of the first or of

[1] "American and English Encyclopedia of Law."

the second degree, the fact of drunkenness may be proved to show the mental status of the accused at the time of the act, and thereby enable the jury to determine whether or not the killing resulted from a deliberate and premeditated purpose."

Senile Dementia.—This condition is one associated with old age, and is perhaps more frequently simply a sign of the gradual decay of the body as well as the brain; in fact, as a rule, it depends upon arterial changes of a degenerative type. It manifests itself by loss of memory, inability to fix the attention on the subject of the moment, and a tendency to recur to scenes and acts of a period long past. As has been said, "man is as old as his arteries," and consequently as a result of any cause, such as worry, emotional excitement or overwork, or disease due to alcoholism and syphilis, we often find true senility present at a comparatively early age. It follows, therefore, that the peculiar symptoms of this condition may occur at the age of forty-five as well as at fifty or seventy-five years of age.

The most common symptoms associated with it are suspicion of those nearest and most dear, hallucinations of hearing and of sight, and delusions which are often of a persecutory character. There is frequently a great fear of impending poverty or ruin. The habits change to those of extreme miserlyness, so that even the ordinary expenses of living may be grudged, and even starvation may take place, although the money may be in their actual possession. We have alluded to a similar set of delusions occurring in alcoholic dementia. While this condition is more common, we may find just the reverse take place. There may be special antipathies toward certain members of the family arising from a delusion of suspicion, leading to great injustice in making a will, or for such reason all the property may be left to institutions. This necessarily leads to litigation either on that ground or that of undue influences. Old age alone, even with decay of the natural powers, is not sufficient to render such a will invalid.

Loss of memory of recent events leads to the development of a more or less marked confusion of thought, so that these patients even forget where they are, though they may be in their own homes which they have occupied for years. They may even assert they are being confined by force in some disagreeable place, whereas as a matter of fact they are perhaps

sitting in their own chair or room. On being convinced of their mistake, they will acknowledge it, but will almost immediately relapse again into the same or a similar error. Apoplectiform attacks are not infrequent, and probably explicable by some temporary occlusion of the cerebral vessels which has not been complete enough to cause a permanent lesion. This condition, therefore, represents the whole state of the circulation of the brain, and it is evident that not enough blood is carried to the various parts of the brain. The bodily condition often corresponds to the mental condition. Where the mental processes are more or less active, though impaired, there is usually loss of flesh and interference with the vegetative functions; where, however, the dementia is more advanced, so that hallucinations and illusions have a less permanent character, the physical condition will improve, or at least bodily weight will increase, and the general appearance of the patient will improve. This is, however, only the beginning of the end, and does not indicate recovery. There is also very commonly a condition of atheroma affecting the vessels of the heart, leading to fatty degeneration.

This condition may be expected usually between the ages of sixty and eighty. The symptoms are generally mild, but they vary within rather wide limits. There may be a revival of the sexual desires which have long remained dormant, or there may be a tendency to alcoholism which may not have existed previously, so that a person hitherto sober and orderly may become dissipated, and be given to sexual excesses and extravagance. These individuals naturally fall an easy prey to designing persons, and it is important to recognize the true nature of this condition in the early stage, for otherwise fortunes may be dissipated. Certainly it would seem that after years of correct living and business probity, acts contrary to the generally accepted character of the person should be considered as evidence of mental derangement rather than as evidence of previous hypocrisy on the part of the individual.

The final stages of the disease are not dissimilar from those of general paresis. There may be considerable excitement, and even maniacal attacks sufficiently severe to require restraint, or the removal of the person to an asylum. Depression is not so common as excitement; still in many of these cases there is

a tendency to suicide as a result of such a profound depression as to almost simulate acute melancholia.

This disease resembles at times the condition observed in women at the menopause, where it is not uncommon to see marked depression with more or less failure of the mental powers, loss of memory, and a series of illusions and delusions. However, this latter condition is often followed by recovery.

The post-mortem changes observed would indicate rather a condition of atrophy and degeneration than any active process. The walls of the vessels are thickened and their lumen narrowed. The membranes are frequently thickened, with here and there evidence of a pachymeningitis. The fluid in the subarachnoid cavity and ventricles is increased. The volume of the brain is decreased. The convolutions are pale, anæmic, and flattened. The sulci are not so deep as in the normal brain. There is also an apparent increase in the Pacchionian bodies, and they are attached to the dura and pia along the longitudinal sinus. They may increase to such an extent as to lead to the formation of areas of softening in the cortex of the brain, not dissimilar to that found in general paresis. Microscopically, the cells of the cortex show signs of degeneration and loss of the processes. The walls of the vessels are seen to be considerably degenerated, and there may be evidences of aneurismal dilatations of the miliary type.

These changes are all of a general rather than of a local character, pointing, as we have said, to a condition of atrophy and degeneration rather than to any active process. We would note that the association fibres connecting one area of the brain with another are also involved, explaining perhaps the loss of association of ideas and the impairment of memory, thus leading to impaired judgment. This is perhaps not peculiar to the disease under consideration, but is explanatory of similar mental states found in various other mental disorders. In conclusion I shall describe under this heading apoplexy.

Cerebral Apoplexy—by which we mean a destructive lesion of the brain caused by hemorrhage into the brain, or softening from the plugging of the vessels by an embolism or thrombosis—may involve legal questions of much importance. We do not, as a rule, have what can be defined as insanity, but often there is dementia, with or without various delusions

and hallucinations, and conditions of impaired speech or aphasia, which makes it difficult for the individual to clearly express his wishes. This may render the testamentary capacity doubtful.

The usual condition found in apoplexy is a paralysis of one-half of the body and aphasia, which may be permanent. Aphasia may be simply motor, in which there is difficulty to express the ideas desired, by reason of impaired articulation, or there may also be a loss of the names of things, *i.e.*, amnesic aphasia, so that communication has to be carried on by gesture. This condition does not, as a rule, or at least does not necessarily, imply that there is any lack of understanding of what is spoken or what is read, so that full intelligence may be maintained. In sensory aphasia, which may be of two varieties, there is what is understood as word blindness, that is, the patient is no longer able to understand written language, or again there may be word deafness, *i.e.*, loss of understanding of spoken language. Mind blindness may be present, but this always implies an extreme degree of dementia, for the individual no longer comprehends the use of things, or their object; this has been called apraxia. The whole character of the individual may be changed—he may become filthy and obscene in his habits, or lewd and addicted to alcohol. The essential point is really a matter of fact as to what the mental condition is at the time of examination. The mere fact of having had an apoplectic seizure does not necessarily imply such mental impairment as to incapacitate one from responsibility for his acts. The question arises most frequently in regard to the testamentary capacity of the individual and whether undue influence has been used at the time of the making of the will.

The rulings as brought out in the celebrated Parish will case have not materially changed to the present time. In this case the will made while the testator was in the full possession of all his faculties was sustained, but the codicils made after his apoplectic seizure were not. The surrogate of New York found and decided as a matter of fact that the testator had not testamentary capacity on the 15th of September, 1853, or on the 15th of June, 1854, to make the two codicils, and that they were not his will or any part thereof, and he refused to admit the same to probate.

The weight of the testimony in the trial brought out that his

whole moral nature was changed, and that he was not morally responsible for the unbecoming and ungentlemanly conduct he so frequently exhibited. It was also shown that after his attack he never was able to utter an intelligible word, and the gestures made by him with the left hand were unmeaning and contradictory. "If Mr. Parish had no power to express a wish to destroy a will, it follows he had none to create one, and the manifestation of his wishes depended entirely upon the interpreter, and the integrity of the interpretation."[1]

However, the will of a paralytic will be sustained, when, though unable to talk at the time of its execution, the mind is unimpaired and he is able to signify his assent to each item by an affirmative nod of the head as it is read to him.[2]

I would also refer to a case where the question of senile dementia following an apoplectic seizure arose in regard to probating the will of the testator,[3] and a similar case in which the probate of the will was objected to, as the maker had had two apoplectic seizures, after which his observation became impaired and he also failed to recognize acquaintances.[4]

ARRESTED CEREBRAL DEVELOPMENT, OR DISEASE OF THE UNDEVELOPED BRAIN.

IDIOCY is a mental condition due to maldevelopment of the brain, which may be congenital, due to absence of parts of the brain structure, or to disease consequent upon inflammatory changes, or to defects in the blood supply to certain brain areas. The degree of actual brain defect will represent the degree of mental impairment. There can, therefore, be no actual subdivisions of idiocy, although for the sake of convenience we may speak of several grades.

In a medico-legal sense there is some importance in these cases both in civil and criminal relations.

[1] Delafield *v.* Parish. "Report of Cases Argued and Determined in the Court of Appeals of the State of New York," vol. xi. (by E. Peschine Smith).

[2] Rothrock *v.* Rothrock (Ore.), 30 Pac., 453.

[3] Swenarton *v.* Hancock (Abbott, vol. ix., Rockland County Surrogate's Court, December, 1879; Supreme Court, second department; General Term, September, 1880; Court of Appeals, 1881; Austin Abbott's New Cases).

[4] The New York State Reporter, by R. M. Stover of New York (Leroy Randall *v.* George H. Downing).

Etiology of Idiocy.—There may be absence of almost the whole of the cerebral hemisphere, only the basal ganglia remaining. The brain may be the seat of meningeal inflammation, with hemorrhage either meningeal or, more rarely, in the brain substance. We find paralysis and usually epilepsy associated in these cases. They may be congenital or follow the diseases of childhood, as the exanthemata.

Porencephalus, usually a congenital condition in which we have a loss of certain portions of the brain substance, usually resulting in a cyst or cavity connecting the cortex of the brain with one of the lateral ventricles, is associated with idiocy or imbecility. We also have in these cases paralysis and epilepsy. In this relation we must also consider traumatism, which may, of course, be productive of extensive destruction of the brain. Among other causes, not associated with brain defect, we must before all consider hereditary influences, as insanity, the various neuroses, syphilis, alcoholism, and consanguinity, etc.; also microcephalus, hydrocephalus, hypertrophy, and cretinism.

The changes observed in the brain depend largely on the cause. The absence of the hemispheres explains the mental condition in such cases. In the second class referred to, in which we find idiocy or imbecility associated with hemiplegia and epilepsy, there is usually considerable atrophy of one of the hemispheres of the brain; the nerve cells and fibres also show degeneration, and there may be descending degeneration of the nerve tract into the spinal cord. In the cases dependent on hereditary syphilis and alcoholism, there is evidence of impairment of the cells of the cortex and a tendency to the formation of connective tissue, resulting in sclerosis of the cerebral substance.

In microcephalic cases we find a decrease in the cranial measurements, which may be symmetrical. Most cases show evidence of dolichocephaly, and there is shortening of the antero-posterior diameter. There may be variations in the deformity, as scaphocephaly, plagiocephaly, etc.

In so-called cretinoid idiocy, which is dependent on some defect in the functional activity of the thyroid gland, or due to its absence, the conformation of the skull is flatter and gives the appearance of being square, the condition being brachycephalic. The bones of the face, especially the malar processes, are also

prominent; this with the infiltration and thickening of the skin gives the face a peculiar expression. The mental state corresponds, however, to idiocy, and should be properly included in this place.

In hydrocephalus, which is a chronic condition resulting in dilatation of the ventricles, we may find the skull very much thinned, and the cranial measurements largely increased. The brain is, however, the seat of atrophy, the cortex being much reduced in thickness and the cell element showing impairment or destruction. The face appears much smaller than normal by the contrast with the increased size of the skull. In hypertrophy of the brain we find an increase especially of the white substance of the brain, and probably an increase of the neuroglia tissue. There is considerable increase in the weight of the brain. The skull measurements are not increased to the extent found in hydrocephalus.[1] "Bourneville distinguishes, from an anatomico-pathological point of view, the following forms in idiocy: (1) Idiocy symptomatic of hydrocephalus (hydrocephalic idiocy); (2) idiocy symptomatic of microcephaly (microcephalic idiocy); (3) idiocy symptomatic of the arrest of development of the convolutions; (4) idiocy symptomatic of a congenital malformation of the brain (porencephaly, absence of corpus callosum, etc.); (5) idiocy symptomatic of hypertrophic or tuberculous sclerosis; (6) idiocy symptomatic of atrophic sclerosis—(*a*) sclerosis of one or both hemispheres; (*b*) sclerosis of one lobe of the brain; (*c*) sclerosis of isolated convolutions; (*d*) sclerosis *chagrinée* (like shagreen) of the brain (?); (7) idiocy symptomatic of chronic meningitis or meningo-encephalitis (meningitic idiocy); (8) idiocy with pachydermic cachexia, or myxœdematous idiocy connected with absence of the thyroid gland. This latter form is called cretinoid idiocy."[2]

The idiot manifests, according to the degree of his mental impairment, a more or less complete loss of mental activity. There is usually great restlessness, and inability to fix the attention on any one thing; there is often understanding sufficient to comprehend what is said to them, but no idea of the necessity of doing what is requested—in fact, all sense of responsibility is absent. Speech is usually involved. The vo-

[1] Tuke's "Dictionary of Psychological Medicine."

[2] Régis, "Practical Manual of Mental Medicine."

cabulary may be limited to but few words, or language may never be acquired, certain sounds intelligible only to those in charge being used to indicate their wishes, a language of their own being thus formed. The higher ethical nature is absent, so that the passions and desires are carried out unrestrainedly. The sexual propensities may be increased, masturbation being openly carried on, or assaults may be made on women and children. Such patients may be violent and homicidal, opposition usually exciting them to anger. There are, however,

FIG. 27.—Typical Face of Idiot.

cases where affection seems to be exceedingly strong. We find in almost all instances a tendency to destroy articles, to appropriate anything within reach. When the intelligence is partially preserved, acts of assault and thieving may be carried out with some degree of cunning, and attempts at concealment may be made.

There is not infrequently a marked appreciation of music, and in some few instances a decided aptitude for certain things, as drawing, figures, or music.

The general appearance of the idiot is indicative of his mental state. Physically he is usually small; the head is, in

the majority of the cases, as we have said, microcephalic. The face lacks any fixity of expression, but is continually changing; the mouth is open, the saliva passing unconsciously away; the teeth are irregular, and the palate often narrow and highly arched. The hands and, in fact, the whole body are subject to choreiform movements, and there are frequently present epileptic seizures. Various other asymmetries of the face are often present, as deformity of the ears and eyes.

Imbecility is a congenital or acquired state of mental weakness, differing in degree rather than kind from idiocy. The same causes exist here as in idiocy. It not infrequently follows in the course of the neuroses, especially epilepsy and chorea. It may manifest itself especially in the moral or intellectual fields. We find the same inability to apply the attention to the acquisition of learning.

Imbeciles frequently give evidence of moral perversion, in the absence of ordinary affection, and by acts of cruelty. They are frequently impulsive, and we not rarely find them committing acts such as we have described under the head of pyromania, kleptomania, etc. The motive often is very slight, perhaps a desire of revenge for some fancied wrong. There is rarely any feeling of remorse for what is done. Many such cases fill our reformatories, and are often among the most incorrigible and mischievous of the inmates. In the milder forms the condition may not have been observed in very early life, or until the restraints of school show an almost complete inability to progress with others in the course of study. Again the exhibition of a sort of moral perversion may not manifest itself until later; the higher ethical nature seems to be absent. They may also be inclined to venereal and alcoholic excesses. Perhaps in these cases there is a greater tendency to some special talents, such as we have referred to, in music or mathematics, etc., than in the class defined as idiots. There is, however, observed through all their acts a seeming absence of the proper appreciation of the relations of ordinary life and its responsibilities.

MODIFIED CLASSIFICATION.

The modifications in the classification of mental diseases have not been of great significance in the last ten years.

The old basis of division has remained the same. No absolute adherence, either to the etiological, symptomatological, or pathological has been followed, but rather a combination of these factors has been employed. There is, in my opinion, no necessity for an exact system of classification either for legal or medical practice.

The real advance in psychiatry in the nomenclature of mental diseases is a more exact definition of the various diseases, a further separation of the symptoms—which have been classed together as the symptom complex of a single disease or its different stages.

The more careful clinical observation of these symptoms in the last ten years has led to a considerable advance in our understanding of special forms of insanity. No new form has been discovered, but out of the confused aggregation of symptoms it has been possible to group a certain class, which appears almost constantly and with comparatively little variation with a fixed form sufficiently strong in each to enable us to apply a name to the entity.

This has simplified two important conditions at least, and made the older forms more clearly defined, by thus withdrawing into a class by themselves cases which have always been difficult satisfactorily to place under the old headings.

Prof. Emil Kraepelin has done this service for psychiatry. While Kraepelin is not optimistic in his statements, he has established a better working schedule of mental diseases than we have previously had.

The general profession finds some difficulty in accepting in full this classification, but the last three years have proved its practicability, so that it has been almost universally adopted in our various large public asylums and among psychiatrists in private practice and in the courts. The two forms of insanity referred to in this introduction are manic-depressive insanity and dementia præcox.

Manic-depressive insanity is a term which has been introduced within the past five years to cover a class of symptoms

which have previously been classified under the head of melancholia and mania. We have in the description by Kraepelin no new symptoms given, in fact no new disease described, but rather a new grouping of well-known symptoms.

Kraepelin would place all cases of mania or melancholia in the young under the title of manic-depressive insanity. Melancholia in its typical form, characterized by depression, slowness of thought, impassivity, well-defined, fixed, but not systematized delusions, and self-condemnatory conceptions is a disease only of the involutional period of life, *i.e.*, the climacteric.

The degeneration of the individual is already greater than the repair; in other words, the age is reached when no further growth takes place in the central nervous system, but rather a decline due to advancing age has commenced. He uses very aptly for this condition the term involution and thus distinguishes true melancholia from all forms of depression, no matter how similar they may be in many respects, which may occur in the young, where the process of evolution or growth is still going on.

With the definition of melancholia limited to this class of patients, he very properly says, the outcome of the disease is very different from that of so-called melancholia in the young.

The former tends progressively toward degeneration, while in the latter the percentage of recovery is very much greater. It is also claimed by this author and his supporters that melancholia in the young is rarely depressive alone, but either at the time is complicated by mania or in case of recurrence after recovery is as likely to begin with maniacal excitement as with depression. He further claims that there is no assurance of a permanent recovery, but that as a rule it is a recurrent disease, alternating with depression and excitement, ultimately to end in dementia. We have then, in his opinion, in the young adult a disease characterized by melancholia or depression, resembling in its general symptoms the melancholia of the climacteric or involutional period of life, but differing from it in that it alternates with mania and is recurrent in its nature. This classification is not wholly acceptable to many experienced psychiatrists. I acknowledge with them that Kraepelin has separated out for us a special form of mental disease, for which the term manic-depressive is ample and satisfactory, cases with which we are all famil-

iar, but which we have not been able satisfactorily to class as mania or melancholia, as both conditions existed, either simultaneously or following one the other every year or at intervals of five or even ten years.

I hold, however, that we have a true melancholia or mania in the young, with little or no variation either in etiology or course from that occurring in the old, differing only in the probability of recovery, which is easily explained by the greater resistance presented by the age of the patient. Kraepelin reports similar cases, but holds that the recovery is only an apparent one, as in his opinion, if these patients live long enough and have sufficient cause or provocation, a second attack will occur, either depressive or manic. This seems to me only begging the question, as we all see cases which after twenty years or more have no recurrence and in which no evidence of disease remains. From a medical and legal aspect we must regard such persons as sane and responsible for all their acts. This point of view is of especial significance in a legal sense.

Dementia Præcox.—Here again we owe to modern psychiatry in the last ten years a simplification in the classification of a most difficult set of symptoms in mental disease. It is a disease of adolescence. It belongs to the evolutional period of life, the greater number of cases occurring before the twenty-fifth year.

It is usually congenital, rather than acquired. Stress, illness, privation, excesses in one previously inclined, developing symptoms which under favorable conditions might have remained quiescent. There are three principal forms: the hebephrenic, katatonic, and paranoid.

The first form occurs in the very young, from the ages of twelve to twenty-one. There is great loss of mental power, inability to understand the ordinary relations of life or to carry on either work or study. The power of concentration or attention is lost together with responsibility. The emotions are in the ascendancy, depressive or excitable, varying with the hour, from mutism to volubility with verbigeration. The æsthetic side of life is much affected, leading to indecency in words and actions. This passes on rapidly to dementia, which may be permanent or be recovered from in part, leaving, however, some degree of mental weakness. We see many such among the

young who are unable to apply themselves to any definite work, are mischievous, cruel, and without a true appreciation of the character of their actions.

The katatonic form presents a condition in which katatonia, a disease described by Kahlbaum, is a principal factor.

Katatonia is a symptom rather than a disease, and is found in other forms of insanity, as melancholia, hysteria, and mania. In dementia præcox it may take on an active character in which the various positions assumed by the patient, although fixed, for the time may change according to the hallucination or delusion which may arise. This state may end in dementia early in its course as in the hebephrenic form. It occurs most commonly between the ages of eighteen and twenty-five, and is frequently accompanied with delusions of grandeur and changed personality, as the delusion of being God, king, etc.

The paranoid type is more difficult of diagnosis, at least in the acute onset of the disease. It occurs at a still later period of adolescence. The patient in early life may have been considered somewhat erratic or even brilliant, but usually somewhat unstable. The early condition is often ushered in by depression or hypochondria, to be soon followed by excitement with egotistic ideas and delusions of persecution, with at times hallucinations of sight and hearing. The power of concentration is soon lost, a condition which is recognized by the patient himself. There are oftentimes attacks, maniacal in character, or a tendency to alcoholic excesses. These cases resemble paranoia of a somewhat atypical form, and by many psychiatrists are still classed as that disease, but more properly fall under the head of adolescent insanity or dementia præcox. Recovery is rarely complete, and, as in the other forms, an early and permanent dementia wholly or in part results.

MENTAL UNSOUNDNESS

IN ITS

LEGAL RELATIONS.

BY

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THE LEGAL ASPECTS OF INSANITY AND MENTAL IMPAIRMENT.

INTRODUCTION.

THE LEGAL VIEW OF MENTAL IMPAIRMENT CONTRASTED WITH THE VIEW OF THE ALIENIST.

A person may be insane according to medical science, and yet responsible for his acts in law.[1]

To the alienist or the expert medical witness it must often appear that the law ignores psychopathic science; and to the intelligent layman who examines the decisions of the courts, they must seem to be chaotic and glaringly inconsistent.

It is true that this branch of the law cannot be praised as an all-wise and harmonious system. Yet many apparent contradictions arise from the mere technicalities of legal practice; and the seemingly obstinate and perverse refusal of the courts to take notice of some of the scientific aspects of insanity is, on the contrary, to be justified by well-grounded reasons of public policy.[2]

For example, public policy is thought, by the courts of nearly all the States, to require a much more stringent definition of mental irresponsibility (in the criminal law at least) than any man of science would be likely to adopt for purposes of classification.

A striking illustration of the difference above mentioned is afforded by the trial for murder, in the Criminal Branch of the Supreme Court of New York, of William Hooper Young (February, 1903). The Court, in the course of the trial, accepted a

[1] State *v.* Kalb, 7 Ohio N. P., 547; 5 Ohio S. & C. P. Dec., 738; State *v.* Tyler, 7 Ohio N. P., 443; 5 Ohio S. & C. P. Dec., 588.

[2] Another source of apparent confusion lies in the practice of the courts of submitting the question of mental state, when there is a conflict of evidence, to the jury, whose finding will not often be disturbed, though an alienist might have reached an opposite conclusion. People *v.* Taylor, 138 N. Y., 398; *infra*, p. 460.

plea of guilty of murder in the second degree, for reasons which were thus explained by the judge to the jury:

"It is only right to tell you, gentlemen, that the court advised the defendant's counsel to tender this plea, and that the court also advised the District Attorney to accept it. The man's mental condition was the cause for the action taken. You are aware that this man has been under medical observation. The experts reported this man legally sane, but insane from a medical point of view. He therefore is supposed to know the difference between right and wrong, and should be held responsible. But as his insanity has been reported to me as being of the progressive order, it is difficult to tell where one line merges into the other. It seemed to me that under the circumstances the law was not justified in inflicting the death penalty, and should be satisfied with a plea that should confine this man to prison for life rather than run the risk of putting to death a possibly irresponsible man." [1]

"By medically insane they say they mean that a man may be well able to determine between what is right and what is wrong, yet not be physically able to restrain himself from doing wrong. While it is true that Young has delusions, still he knows what is wrong and what is right. Now, there is a very narrow line of demarcation between these two kinds of insanity, and it is hard to tell where one merges and is lost in the other. . . . Under these circumstances I think the cause of justice can better be served by sending this man to prison for life, rather than that there should be any question as to whether we put to death a man that was irresponsible in any way for his deed." [2]

GENERAL DEFINITIONS; LEGAL CLASSIFICATIONS.

English common law anciently recognized two categories of mental diseases:

(1) DEMENTIA NATURALIS, or idiocy; and (2) DEMENTIA ADVENTITIA, under which general insanity is included. To this last the term "lunacy" is usually applied.

The following definitions are from "The American and English Encyclopædia of Law":

[1] N. Y. *Times*, February 10, 1903.

[2] N. Y. *Evening Sun*, February 11, 1903.

An insane person is one whose mind is affected by general imbecility, or is subject to one or more specific delusions.

A Lunatic.—At common law, a lunatic was one who hath had understanding, but by disease, grief, or other accident hath lost the use of his reason.

An Idiot.—An idiot was one who hath had no understanding from his nativity.

Non Compos Mentis.—The words *non compos mentis* seem to have been used as a generic term, including both idiocy and lunacy. They had, in the earlier cases, both in England and in the United States, a more restricted meaning than they bear at present, and were held to import a total deprivation of sense, and not to include mere imbecility or weakness of mind. In the more modern cases they are held to include not only cases of idiocy and lunacy, as strictly defined at common law, but also cases of imbecility where the subject is incapable of conducting the ordinary affairs of life, and liable to become the victim of his own weakness.[1]

Dr. Beck uses the term "mental alienation" to cover all cases of unsoundness of mind, and divides these into: *First.* Those states of mental *infirmity* depending upon congenital defects of the brain, or on the imperfect development of its faculties during infancy, *viz.*, idiocy and imbecility. *Second.* All those forms of mental *derangement* which arise from disease of the brain subsequent to its full development, and which may be said to constitute insanity proper. This class comprises those conditions of perverted mind commonly recognized by the terms mania, melancholia, monomania, and dementia. *The legal definition* of a state of mental alienation, and the adjudications under it, are briefly treated at Vol. I., page 765 *et seq.* of Dr. Beck's treatise.[2]

Says Dr. Ray: "In the *Roman law*, the insane or demented are divided into two classes: those whose understanding is weak or null, *menti capti*, and those who are restless and furious, *furioci*. The French and Prussian codes make use of the terms *dimenci*, *furcur*, *imbecilliti*, without pretending to define them.

"The English common law originally recognized but two kinds of insanity, *idiocy* and *lunacy*, the subjects of which were desig-

[1] "Am. and Eng. Encyclopædia of Law," 1st ed., vol. ii., title Insanity.

[2] Beck's "Med. Jur.," 12th ed.

nated by the term *non compos mentis,* which was used in a generic sense, and meant to embrace all who, from defect of understanding, require the protection of the law. An occasional attempt has been made by jurists to attach some definite ideas to these terms, and to point out the various descriptions of persons to whom they may be applied. Lord Coke says there are four kinds of men who may be said to be *non compos mentis:* 1. An idiot who, from his nativity, by perpetual infirmity is *non compos;* 2. He that by sickness, grief, or other accident wholly loseth his memory and understanding; 3. A lunatic that hath sometimes his understanding and sometimes not, *aliquando gaudet lucidis intervallis;* 4. He that by his own vicious act for a time depriveth himself of his memory and understanding, as he that is drunken.

"Nothing can show more plainly how imperfect were the notions of the early law writers concerning insanity than this classification of insane persons, and their attempts to define the several classes. An idiot is defined to be a person who cannot count or number twenty pence or tell who was his father or mother, or how old he is, so as it may appear that he hath no understanding of reason, what shall be for his profit and what shall be for his loss; but if he have sufficient understanding to know and understand his letters and to read by teaching or information, he is not an idiot."[1]

Bucknill on *Criminal Lunacy*[2] describes *insanity* as "a condition of the mind in which a false action or conception, or judgment, a defective power of the will or an uncontrollable violence of the emotions and instincts have separately or conjointly been produced by disease."[3]

INTOXICATION, as a transitory phase of mental impairment, will be defined and considered below, under specific heads.[4] If it results in permanent mental impairment, the law regards the effect, insanity, rather than the cause.

The *committee* of one judicially declared incompetent is a person appointed by a court having due jurisdiction to have charge of the person or property, or both, of the incompetent.

[1] Ray, "Medical Jurisprudence of Insanity," 4th ed., p. 4, citing Coke's Littleton, 247 e., and 1 Fitzherbert, "Natura Brevium," 583, ed. 1652.

[2] pp. 27, 28.

[3] See also Taylor, "Med. Jur.," 6th Am. ed., p. 631; Wharton and Stillé, "Med. Jur.," vol. iii., p. 118.

[4] See *infra*, p. 354, "Contracts;" p. 384, "Wills;" p. 425, "Torts;" p. 421, "Witnesses;" p. 429, "Criminal responsibility;" p. 481, "Habitually intemperate person."

STATUTORY DEFINITIONS AND STATUTORY WORDS OR PHRASES DENOTING MENTAL UNSOUNDNESS.

Occasionally a statute has defined the term used by it to denote mental unsoundness; for instance, in New York the term *lunacy* in the statutes includes every (continuing) unsoundness of mind except *idiocy.*[1]

But more frequently a word or phrase denoting mental impairment or mental soundness is introduced into a statute without any definition, and in such cases the courts have been called upon to define it; for instance: in Ohio, Revised Statutes, § 7,240, authorizes a trial of the issue whether a person is *sane;* a person is not "sane" within the meaning of the statute when he has not sufficient reason and mental capacity to understand that his act was wrong, or, having such sufficient reason to distinguish right from wrong, has not sufficient will to refrain from the wrong.[2]

An Ohio statute [3] permits the making of a will by a person of *sound mind and memory.* A person suffering with pneumonia and approaching death, whose condition is such that there is immediate action on the brain cells which prevents consecutive thought, is not "of sound mind." [4]

In Kentucky, one who is by reason of great age and mere *physical* infirmity unable to control, manage, and care for his estate is not one "who is so imbecile or unsound as to be incompetent." [5]

Additional cases discussing particular phrases used in statutes are cited in the note.[6]

[1] Statutory Construction Law, Laws of 1892, chap. 677, sec. 7. See Matter of Preston, 113 App. Div. (N. Y.), 732; Code Civ. Pro. § 2335: "incompetency to manage affairs in consequence of imbecility and loss of memory and understanding" is lunacy within this definition. *In re* Schrodt, 32 Misc. Rep., 540; 67 N. Y. Supp., 244; "incompetent person and unfit to manage his affairs," *In re* Clark, 57 App. Div., 5; 67 N. Y. Supp., 631; Matter of Lewis, 57 Misc. (N. Y.), 670.

[2] State *v.* Kalb, 7 Ohio N. P., 547; 5 Ohio S. & C. P. D., 738.

[3] R. S. § 5914.

[4] *In re* Burrows Est., 11 Ohio S. & C. P. Dec., 229; 8 Ohio N. P., 358.

[5] Taylor *v.* Moore, 23 Ky. Law Rep., 1572; 65 S. W. Rep., 612.

[6] *Incompetent and incapable,—In re* Leonard's Est. (Mich.), 54 N. W. R., 1082. *Imbecile,—In re* Emswiler, 8 Ohio N. P., 132; 11 Ohio S. & C. P. Dec., 10. *Insanity,*—State *v.* Helm, 69 Ark., 167; 61 S. W. Rep., 915.

Unsound mind and incapable of managing his estate,—Hamrick *v.* State, 34 N. E. Rep., 3; 134 Ind., 324. *Unsound mind.*—Maas *v.* Territory, 10 Okl., 714; 63 Pac. R., 960.

LEGAL EFFECT OF MENTAL UNSOUNDNESS IN GENERAL.

It will be seen in the specific treatment of particular subjects below that various mental impairments have diverse legal effects, and that legal considerations give rise to different measures of legal competency with respect to different classes of transactions. Accordingly it is necessary, in studying the legal relations of mental impairment, to consider separately these different classes.

THE EFFECT OF MENTAL UNSOUNDNESS ON RESIDENCE.

Change of residence ordinarily requires an intelligent intent;[1] but residence of an insane person can be changed by the act of his committee,[2] or by one having charge of him, as his parent or guardian.[3] Temporary residence of an incompetent, as in an asylum, does not change his legal residence.[4]

THE EFFECT OF MENTAL UNSOUNDNESS ON CONTRACTS, INCLUDING DEEDS.

At *common law* a party could not avoid his contract on the plea of lunacy, in accordance with an ancient maxim that no man of full age shall be allowed to disable or stultify himself; though, at the same time, it allowed his heirs or other persons interested to avail themselves of this privilege.[5] "Within a few years, however (1838), English courts have almost entirely disregarded the ancient maxim,[6] and in this country it has long since lost its authority altogether."[7]

The effect of insanity on contracts is fully treated below.[8]

[1] On the subject of domicile of persons of unsound mind see Woerner's "Law of Guardianship," § 206; Woerner's "Am. Law. of Adm.," § 206; Wharton, "Conflict of Laws," 2d ed., § 52. On question of conflict of laws as to person of unsound mind see Wharton, "Conflict of Laws," 2d ed., §§ 574, 575. On jurisdiction based upon citizenship see *infra* p. 598; see "Foreign Curators of Lunaties and the English Courts," 36 Law J., 480.

[2] *In re* Sullivan, 24 Mise. R. (N.Y.), 357; 53 N. Y. Supp., 717.

[3] *In re* Holeomb (Iowa), 82 N. W. Rep., 1000.

[4] *In re* Porter, 34 App. Div., 147; 54 N. Y. Supp., 654; 28 Civ. Pro. R., 405. *Cf. In re* Fidelity Trust Co., 27 Mise. (N. Y.), 118; 57 N. Y. Supp., 361.

[5] 2 Blaekstone, 295.

[6] Baxter *v.* Earl Portsmouth, 7 D. & R., 614; 9 Alb. L. J., 30; Chitty on Contracts, 256; Gates *v.* Bain, 2 Strick., 1104.

[7] Webster *v.* Woodward, 3 Day, 90; Riee *v.* Peel, 15 Johns., 503; Mitchell *v.* Kingman, 5 Pickering, 431. But see O'Connell *v.* Beecher, 21 App. Div. (N. Y.), 298; 47 N. Y. Supp., 334, where a person was not permitted as a witness to express an opinion on his own mental condition, to avoid his contract.

[8] *Infra*, p. 364.

At present it will be sufficient to state that the better rule now is that the agreement of an insane person is not void, but voidable, at his option or that of his representatives.[1] But subsequent insanity of a party does not enable him to avoid his contract, made previous to his becoming insane, nor does it affect his obligation in any way, unless perhaps it be a contract for personal services.[2]

COMPETENCY TO CONTRACT—MEASURE OF COMPETENCY IN GENERAL.

When a contract is impeached on the ground of mental incapacity of a party, *not previously adjudged incompetent*, the true inquiry is, whether he had the ability to comprehend in a reasonable manner the nature of the affair in which he participated.[3] If fraud or undue influence has been practised on a person of weak or impaired intellect, other principles apply;[4] but where mental incapacity is alleged, there must be inability to know what the act is to which the contract relates. So long as one possesses mental faculties requisite to transact rationally the ordinary affairs of life,[5] his contracts and deeds will be valid. He must have sufficient intellectual capacity to know what he is doing,[6] but sufficient discernment or education to transact business with prudence and discretion is not required.[7]

[1] Blinn *v.* Schwarz, 177 N. Y., 252; Hanley *v.* Nat. Loan, etc., Co., 29 S. E. R., 1002; 44 W. Va., 450. When a gift is made by a lunatic, the donee holds the property charged with a constructive trust in favor of the donor. Tcegarden *v.* Lewis, 35 N. E. R. (Ind.), 24.

[2] Sands *v.* Potter, 59 Ill. App., 206; Pollock *v.* Horn, 13 Wash., 626; 43 Pac. R., 885; Haines *v.* Scott, 35 App. Div., 515; 54 N. Y. Supp., 844; Van Meter *v.* Darragh, 115 Mo., 153; 22 S.W. R., 30; Lindberg *v.* Davidson, 72 Minn., 49; 74 N. W. Rep., 1018; Wurster *v.* Amifield, 67 App. Div., 158; 73 N. Y. Supp., 609.

[3] He must have a reasonable perception of the nature and terms of the contract. Elwood *v.* O'Brien, 74 N. W. Rep., 740; 105 Iowa, 239; Swartwood *v.* Chance, 131 Iowa, 714; 109 N. W. R., 297; Sherbero *v.* Miller, 65 Atl., 472 (N. J. Eq.).

[4] Difference in mental capacity between the two parties to a contract is not ground for rescission, unless the stronger minded defrauds the other. Moore *v.* Cross, 87 Tex., 557; 29 S. W. R., 1051.

[5] Raymond *v.* Wathen, 142 Ind., 367; 41 N. E. R., 815; Davis *v.* Calvert, 18 Ky. L. R., 975; 38 S. W. R., 884.

[6] Ring *v.* Lawless, 190 Ill., 520; 61 N. E. R., 881; Ramsdell *v.* Ramsdell, 8 Det. Leg. News (Mich.), 541; 87 N. W. R., 81; Kelly *v.* Perrault (Idaho), 48 Pac. R., 45.

[7] Bishop on Contracts, §§ 972, 973, 974.

Improvidence and unthriftiness and lack of business success do not constitute mental incompeten e. Dominick *v.* Randolph, 124 Ala., 557; 27 So. Rep.. 481. Nor illiteracy and ignorance of business. Soberanes *v.* Soberanes, 106 Cal., 1; 39 Pac. R., 39.

If the transaction be of unusual complexity, it has been held that a higher degree of mental capacity is requisite than to attend to the ordinary affairs of life or to make a will; for example, if the contract be one for the exchange of lands.[1]

In any case the question to be considered is not whether the alleged incompetent *understood* the details of the transaction, but whether he, in fact, had *the capacity to understand* its nature[2] and decide intelligently about it;[3] not whether the mind was insane or impaired[4] or had not capacity to transact business *generally*, but whether the mind had capacity to deal with the particular business in question.[5]

It is not sufficient to show merely a diseased mental state, to avoid a contract. Herein is the essential difference between the medical and the legal point of view; one deals with the objective physical state, the other with the capacity of the mind for reason. It must be shown that mental disease had affected the understanding to the degree above stated;[6] although, of course, if the disease falls within the extreme category of idiocy, lack of capacity may be presumed.[7]

[1] Turner *v.* Houpt, 53 N. J. Eq., 526; 33 Atl. R., 28. *Cf.* contrary rule as to wills, *infra*, p. 386.

[2] Merritt *v.* Merritt, 32 Misc. (N. Y.), 21; 66 N. Y. Supp., 123; aff'd 62 App. Div., 617; 71 N. Y. Supp., 1142.

[3] Mann *v.* Keene Guaranty Sav. Bk., 86 Fed., 51.

[4] O'Neill *v.* Nolan, 66 Hun (N. Y.), 631; 21 N. Y. Supp.,222.

[5] Coffey *v.* Coffey, 74 Ill. App., 241. Thus, where delivery of a deed of trust was delayed, the test was not capacity to understand the details of the contract at the time of delivery, but at the time of signing; capacity to complete the original transaction at the time of delivery was sufficient. S. c., Coffey *v.* Coffey, 179 Ill., 283; 53 N. E. R., 590. See also Falk *v.* Wettram, 120 Cal., 479; 52 Pac. Rep., 707; Lynch *v.* Doran, 95 Mich., 395; 54 N. W., 882; Kroenung *v.* Goehri, 112 Mo., 641; 20 S. W., 661; White *v.* Davis (N. Y.), 62 Hun, 622; 17 N. Y. S., 548; Wright *v.* Wright, 139 Mass., 177; 29 N. E., 380; Brothers *v.* Bank of Kaukauna, 84 Wis., 381; 54 N. W. Rep., 786; Carnagie *v.* Diven, 49 Pac. R., 891; 31 Ore., 366; Farnsworth *v.* Noffsinger, 33 S. E. Rep., 246; 46 W. Va., 410. In Overall *v.* Avant, 46 S. W. Rep., 1031 (Tenn. Ct. App.), a bill of heirs to set aside deed of ancestor alleged mental incapacity to transact business, paralysis a few weeks after execution of deed, old age, grantor easily influenced, and sale for small percentage of actual value, *held* a sufficient statement of facts to show want of mental capacity, on demurrer. See also illustrations of lack of mental capacity, Beasley *v.* Beasley, 180 Ill., 163; 54 N. E. Rep., 187; Galt *v.* Provan, 79 N. W. Rep., 357; 108 Iowa, 561.

[6] It is not enough to show merely that a person was in the first stage of paresis. Haines *v.* Scott, 35 App. Div. (N. Y.), 515; 54 N. Y. Supp., 844; Critchfield *v.* Easterday, 26 App. D. C., 89.

[7] An action will not lie on the alleged contract of an admitted "congenital idiot." Bicknell *v.* Spear, 38 Misc. R. (N. Y.), 389; 77 N. Y. Supp., 920.

DELUSIONAL INSANITY AND STATES OF MIND BORDERING ON INSANITY.

The greatest difficulties in connection with the application of the above tests to given cases have arisen where delusional insanity, and specifically paranoia, have existed. The courts have frequently been called upon to determine whether the presence in the mind of a maker of a will of systematic insane delusions incapacitated him for the testamentary act, but not so frequently in the case of contracts. The cases on wills are considered separately (*infra*, page 394), but may be consulted as generally applicable to contracts also. As to both contracts and wills the general rule may be laid down that delusions alone, or even insane delusions, do not affect them, unless they operated directly to induce the execution of the instrument.[1] For example, a mere belief in witches does not incapacitate to make a deed.[2]

In a suit by an insane person to recover the proceeds of a note assigned by her at a time when she was alleged to be insane, it was for the jury to determine whether plaintiff was competent to make the contract, and it was proper for the judge to refuse to instruct that delusion is the true test of insanity in the absence of frenzy or raving madness.[3]

Delusions do not incapacitate where the subject-matter of the deed is not affected,[4] or where the insane delusion did not move the grantor to make the deed.[5]

Where the evidence showed that the maker of a trust deed was capable of comprehending and acting intelligently upon the business out of which the deed grew, and understood the nature and consequences of his act, evidence of monomaniacal delusions was held insufficient to invalidate the deed.[6]

In a certain class of cases, however, the question whether delusions are insane delusions or not is important. Where the ex-

[1] See Hughes *v.* Jones, 116 N. Y., 67; Hay *v.* Miller, 48 Neb., 156; 66 N. W. R., 1115; Dewey *v.* Allgire, 37 Neb., 6; 55 N. W. R., 276.

[2] Schuettler *v.* Carman, 98 Iowa, 276; 67 N. W. R., 249.

[3] Turner *v.* Utah Title Insurance and Trust Co., 10 Utah, 61; 37 Pac., 91 (1893); Turner *v.* Wells, Fargo & Co., 10 Utah, 75; 37 Pac., 94; Turner *v.* Union National Bank, 10 Utah, 77; 37 Pac., 95.

[4] See Bowman *v.* N. W. Mut. Relief Ass'n., 90 Wis., 144; 62 N. W. Rep., 924; *infra* p. 396.

[5] Meigs *v.* Dexter, 172 Mass., 217, 52 N. E. R., 75.

[6] Seawel *v.* Dirst, 70 Ark., 166; 66 S. W. R., 1058.

cution of a contract was induced by erroneous opinions and beliefs, this does not invalidate it unless those particular errors amounted to insane delusions. If they were founded on facts it can rarely be held that they evidenced lack of capacity.[1]

In Jones *v.* Hughes, 15 Abbott's New Cases, 141 (N. Y. Supreme Court, 8th district, Special Term, 1883), Daniels, Judge, said: "This action has been prosecuted to set aside and annul a deed executed by Richard Hughes, under the name of David Jones, to the defendant, Joseph Jones, because of mental incapacity of the grantor. The deed was executed on the 7th of October, 1870, and recorded on the second day of the succeeding month. It in terms conveyed the property called Buckhorn Island, situated near the foot of Grand Island in the Niagara River. It has been owned and occupied by the grantor from the year 1853. The grantee in the deed is the son of the grantor by a second marriage, alleged to have been, as it probably was, unlawfully contracted. The plaintiff is a son by a preceding marriage, and entitled to inherit the property in case the deed should be set aside. The grantee had nothing whatsoever to do with the transaction and in no measure influenced the conduct of the grantor in making it. The grantor was desirous of having the grantee and his wife occupy the property and be taken care of and supported by them during his natural life. His additional object was to secure a like support for his second wife.

"Before the deed was made the grantor consulted an acquaintance, with whom he had dealt many years, concerning the execution of the deed, and went with him to a reputable attorney to have the business done. These and other witnesses agree that in what he said and did on these occasions he appeared to act rationally and intelligently, and the evidence of all these persons tends very directly to establish the fact that he fully understood the business which was transacted and the object designed to be accomplished by it, as well as the property to be conveyed; and that it was his deliberate purpose to make the disposition of it which he in form made by the execution of this deed. In the preceding month of March he made a twelve years' lease of the same property upon the same consideration to the plaintiff, who went into possession but surrendered it

[1] See Cutler *v.* Zollinger, 22 S. W. Rep., 895; 117 Mo., 92. See also Wills, *infra*, p. 394, "Mistaken belief;" p. 395, "Insane delusions."

afterward because of disagreement between himself and his father. Testimony was given in behalf of the plaintiff, as well as by himself as a witness in the case, showing that his father, who was a man of very advanced age, was irritable in his disposition, boisterous in his speech, suspicious of those who dealt with him or were employed by him in the management of his property, and indulged in the relation of marvellous and exaggerated stories. This appears to have been his character and his habits for many years preceding the time when the deed was made, and while no one suspected his sanity or his ability properly to manage his own affairs, the suspicions entertained by him appeared to have arisen from observations he had made, leading him to believe that the persons employed by him, or managing his property, dealt dishonestly with him; and the relations he repeated of marvellous occurrences, in which he had been a party, referred to transactions which had taken place in his early life. The statements he made and the suspicions he entertained appeared to have been exaggerated and in many cases extremely absurd in their character; but as long as they were founded upon the facts from which he was satisfied to deduce them, they were not indications of insanity or unsoundness of mind, although extended very much beyond what was justified by the circumstances. They were, therefore, distinguishable from mere delusions, and do not establish that unsoundness of mind which would legally disable him from making a binding disposition of his property. While he indulged in these statements and suspicions, he still continued to manage and conduct his affairs, and the persons having dealings with him apparently found no reason for suspecting his inability to do that business with accuracy and judgment. Toward the latter portion of his life, and before or about the time when the deed was made, he was impressed with the delusion that British ships lay in the vicinity of the island, manned by early acquaintances, for the purpose of protecting it; but *this delusion was in no form or manner connected with the execution and delivery of this deed.* His mind still in other respects and on other subjects, although impaired by age, in its strength was active and intelligent. Between the delusion and the transaction of his business there seems to have been no connection whatever. Upon other occasions he became violent and vindictive in his conduct, but there

was always a ground of offence calculated to produce resentment as well as irritation on his part. His conduct, though extreme, was not unnatural for a person of his disposition, education, and temperament. He believed in witchcraft and feats which may be accomplished by the power of persons affecting it, but this was rather a matter of superstition than evidence of mental incapacity or delusion. While he was boisterous, vindictive, revengeful, easily provoked and aroused, he still appears to have understood the business transactions to which he was a party, and to manage them with intelligence and judgment. Upon all the evidence elicited from the witnesses in the case upon these subjects, it cannot be concluded that he was, by reason of mental infirmity, incapable of making and executing this deed. On the contrary, this evidence sustains the conclusion that it resulted from intelligent consideration and reflection upon his part, and that it was understandingly made to carry into effect a fixed design which he himself alone had previously formed. Evidence was given showing that proceedings were taken under the statute in September, 1871, on the application of the grantee in this deed, to procure an adjudication determining his father, the grantor, to be a lunatic or person of unsound mind. Previous to that time he had been imprisoned in the county jail at the suit of the plaintiff, and evidence has been given tending to indicate that such an imprisonment would aggregate the tendency of his health in the direction of a state of insanity. This theory is entirely natural, for the imprisonment of an old man at the instance of his son would ordinarily be attended by some effect on his character and mental condition. The fact that his conduct and speech impressed the jurors as well as the jailer with the conviction that he was a person of unsound mind at the time can, for this reason, have no very decided influence upon the inquiry whether that was or not his condition at the time of the execution of the deed. To determine that, the important evidence was that which related to the contemporaneous occurrences and the previous conditions in which this man appeared to have been. The application upon which the proceedings were instituted and carried on was based on the petition of Joseph H. Jones, the grantee of the deed. In this petition it was alleged, ' Davis Jones, the grantor, eighty-five years of age, had been a lunatic for the space of five years preceding that

time and so far deprived of his reason as to be wholly unfit and unable to govern himself or to manage his own affairs'; and upon the hearing under the authority of the writ which was issued, the jury in form found that to be his condition. But neither these allegations nor the conclusions of the jury presented the inquiry—whether as a matter of fact he was competent to execute this deed at the time when it was made. That was not a subject presented for trial by the petition, or the investigation made by the jury; it was not a matter alleged in the petition or in any manner drawn in question. No evidence could properly have been given upon it, and it was not the province of the jury to make a determination which would or would not sustain this particular transaction. The purpose of the proceeding was to determine whether from his age and imbecility he required a guardianship of a more competent person for the protection of himself and his affairs. The legal prosecution of such an inquiry did not include the question now presented in this case—whether or not the grantor of this deed was competent to execute it. Therefore, the finding of that jury is not in any way prejudicial to the present question (Am. Seamen's Soc. *v.* Hopper, 33 N. Y., 619). It has been held accordingly that an inquisition of this nature, finding the party to have been of unsound mind for a preceding period of time, is not conclusive as to his incapacity to make a will during that time (Campbell *v.* Consalus, 25 N. Y., 613), and a similar view of such a proceeding was taken in Banker *v.* Banker (63 N. Y., 409). Judgment will, therefore, be ordered in favor of the defendant."

This decision was affirmed by the N. Y. Court of Appeals, Hughes *v.* Jones, 116 N. Y., 67.

Old Age and Mental Weakness. Undue Influence.

Though the grantor in a deed be extremely old or feeble mentally, his understanding, memory, and mind enfeebled by age, and his actions occasionally strange and eccentric, and though he be unable to transact many affairs of life, yet if age has not rendered him imbecile so that he does not know the nature and effect of the contract, it is not invalid.[1]

[1] Ball *v.* Smith, 83 Hun (N. Y.), 438; 23 N. Y. Supp., 54; Francis *v.* Wilkinson, 147 Ill., 370; 35 N. E. Rep., 150; Buckey *v.* Buckey, 38

Old age is not of itself evidence of incapacity to make a contract,[1] nor will age, weakness of mind, and eccentricity render a deed void if the grantor understands the nature and effect of his act.[2] But where old age has rendered the grantor imbecile,[3] or where he is unduly influenced[4] or imposed upon[5] by persons standing in a confidential relation to him,[4] or where the deed is voluntary and there is doubt whether the grantor understood or assented,[6] or where a person of great age is imposed upon in a season of excitement and distress,[7] his deed is voidable. In such a case his mental weakness is merely an element in a cause of action based on undue influence.[8] When the elements of age, infirmity, and mental weakness are blended with a contractual act of a suspiciously disadvantageous character, a presumption of fraud may arise.

Contracts claimed to have been made with aged or infirm persons to be enforced after death, of an unreasonable nature, for example, disinheriting their lawful heirs, are properly subject to suspicion, and must be established by the strongest evidence.[9]

While a court can grant no relief against the consequences of mistaken judgment or mere imprudence on the part of the one making a contract, yet where the nature of the act by a person

W. Va., 168; 18 S. E. Rep., 383; Davis *v.* Latta, 94 Iowa, 727; 62 N. W. Rep., 17.

[1] Carnagie *v.* Diven, 49 Pac. Rep., 891; 31 Oregon, 366; Peabody *v.* Kendall (Ill. Sup.), 32 N. E. Rep., 674; Argo *v.* Coffin, 32 N. E. Rep., 679; 142 Ill., 368; Lynch *v.* Doran (Mich.), 54 N. W. Rep., 882; Buckey *v.* Buckey, 38 W. Va., 168; 18 S. E. Rep., 383; see also *infra* p. 410. Duncan *v.* Mason (Ky.), 20 S. W., 252.

[2] Delaplain *v.* Grubb, 44 W. Va., 612; 30 S. E. Rep., 201; see also McKissock *v.* Groom, 148 Mo., 459; 50 S. W. Rep., 115; Richardson *v.* Adams, 110 Ga., 425; 35 S. E. R., 648; Sibley *v.* Somers (N. J. Ch.), 50 Atl. R., 321.

[3] Brothers *v.* Bank of Kaukauna, 84 Wis., 381; 54 N. W., 786; see also Henrizi *v.* Kehr, 90 Wis., 344; 63 N. W. Rep., 285; Boggess *v.* Boggess, 29 S. W. Rep., 1018; 127 Mo., 305.

[4] Ross *v.* Payson, 160 Ill., 349; 43 N. E. Rep., 399; Tomlinson *v.* Tomlinson, 103 Iowa, 740; 72 N. W. R., 664; Wille *v.* Wille, 57 S. C., 413; 35 S. E. Rep., 804.

[5] Landfair *v.* Thompson, 112 Ga., 487; 37 S. E. Rep., 717; Vanosdel *v.* Hyce (La.), 46 La. Ann., 387; 15 So., 19. Dewey *v.* Allgire, 37 Neb., 6; 55 N. W., 276.

[6] Hayes *v.* Kerr, 19 App. Div. (N. Y.), 91; 45 N. Y. Supp., 1050; Thomas *v.* Crawford, 118 Mich., 253; 76 N. W. Rep., 394.

[7] Bruguier *v.* Pepin, 76 N. W. Rep., 808; 106 Iowa, 432; Thomas *v.* Crawford (*supra*).

[8] Mays *v.* Prewett, 98 Tenn., 474; 40 S. W. R., 483; Jennings *v.* Hennessy, 26 Misc. (N. Y.), 265; 55 Supp., 833.

[9] Shakespeare *v.* Markham, 72 N. Y., 400. But see Looby *v.* Redmond, 66 Conn., 444; 34 Atl. Rep., 102. Deed of aged, infirm, fretful grantor, *upheld*. Francis *v.* Wikinson (Ill. Sup.), 147 Ill., 370; 35 N. E., 150.

mentally enfeebled is such as to justify the conclusion that he has been imposed upon by artifice or undue influence, a court of equity will intervene.

Though the mind of one party to a written contract had become impaired by age, the contract is none the less operative against the other party, if the latter was in full possession of his faculties.[1]

Mere Physical and Mental Weakness Does Not Incapacitate.—In an action against the maker of a promissory note, given to settle a debt he had incurred, the defence was that he was *non compos mentis*. He had been of great physical and mental strength, but at the time of signing the note was physically very weak, and had lost much of his intellectual vigor, but was competent to attend to his ordinary business affairs. His letters concerning the transaction were clear, and showed a good memory, and his conduct and language afterward showed that he fully understood what he had done. *Held*, that he was competent to make the contract.[2]

The principle is identical with that applying to old age which causes mental weakness, but not actual imbecility.[3]

And the same rules apply to all kinds of mental weakness, whether induced by pain, the use of anæsthetics,[4] or the approach of death,[5] or congenital. The effect of such weakness upon the capacity to contract is merely a question of its degree.[6]

[1] Elder *v.* Schumacher, 18 Colo., 433; 33 Pac., 175.

[2] Des Moines, etc., *v.* Chisholm, 71 Iowa, 675. Mere weakness of mind will not invalidate a contract; if the maker of a promissory note knew what he was doing, to whom given and for whose benefit the contract was made, that it was for the payment of money, and the amount, he had sufficient capacity. Ducker *v.* Whitson, 16 S. E. Rep., 854; 112 N. C., 44.

[3] *Supra*, p. 361.

[4] Cutts *v.* Young, 147 Mo., 587; 49 S. W. Rep., 548; Swank *v.* Swank, 61 Pac. R., 846 (Ore.); Krause *v.* Stein, 173 Pa. St., 221; 33 Atl. Rep., 1031.

[5] Loftus *v.* Maloney, 89 Va., 576; 16 S. E. R., 749.

[6] See generally on mental weakness: Dewey *v.* Algire, 37 Neb., 6; 55 N. W. Rep., 276; Hay *v.* Miller, 48 Neb., 156; 66 N. W. Rep., 1115; Zeltner *v.* Bodman Home, 1 Ohio, S. & C. P. Dec., 306 (here the deed was made without the knowledge of relatives, to a home for the aged, in consideration of maintenance). Turner *v.* Utah Title, etc., Co., 10 Utah, 61; 37 Pac. Rep., 91, 94, 95; Kroenung *v.* Gochri, 112 Mo., 641; 20 S. W. Rep., 661; Peters *v.* Peters, 59 N. W. Rep., 609; 101 Mich., 291; Ballard *v.* Chicago, etc., Ry. Co., 70 Mo. App., 108; Hoch *v.* Hoeh, 197 Pa. St., 387; 47 Atl. Rep., 351; Bennett *v.* Bennett (Neb.), 91 N. W. R., 409; Eldredge *v.* Palmer, 185 Ill., 618; 57 N. E. Rep., 770; Saffer *v.* Mast, 79 N. E. R., 32; 223 Ill., 108; Odell *v.* Moss, 130 Cal., 352; 62 Pac. R., 555.

EFFECT OF INCOMPETENCY IN GENERAL.

With the exception of certain cases hereafter mentioned, an agreement of an insane person immediately connected with and growing out of his insanity is voidable, at his option or that of his representatives, and not void. This is the law, by the great weight of authority, and it applies in all cases of contracts, including deeds of lands, where the incompetent has not been so adjudged by a tribunal having due jurisdiction.[1]

A person incompetent to execute a deed is incompetent to execute a power of attorney to make a deed, and the deed executed under such power is void, if his deed would be void.[2]

[1] Wharton's Law of Contracts, sec. 107, p. 138; Bishop on Contracts, secs. 873–874; Luhrs *v.* Hancock, 181 U. S., 567; Blinn *v.* Schwarz, 177 N. Y., 252; Smith *v.* Ryan, 191 N. Y., 452; Allis *v.* Billings, 6 Metc. (Mass.), 415; Lancaster Co. Nat. Bk. *v.* Moore; 78 Pa. St., 407; Long *v.* Long, 9 Md., 348; Riley *v.* Carter, 76 Md., 581; 25 Atl. R., 667; 19 L. R. A., 489; Matthiessen & Weichers Ref. Co. *v.* McMahon, 38 N. J. L., 536; Wilder *v.* Weakley, 34 Ind., 181; Ætna Life Ins. Co. *v.* Sellers, 154 Ind., 370; 56 N. E. R., 97; Behrens *v.* McKenzie, 23 Iowa, 333; Morris *v.* Gt. North. Ry. Co., 67 Minn., 74; 69 N. W. R., 628; Hawley *v.* Nat'l Loan, etc., Co., 44 W. Va., 450; 29 S. E. R., 1022; French Lumbering Co. *v.* Theriault, 107 Wis., 627; 83 N. W. R., 927; 51 L. R. A., 910; Moran *v.* Moran, 106 Mich., 8; 63 N. W. R., 989; Wolcott *v.* Conn. Gen. L. I. Co., 100 N. W. R., 569; 11 Det. Leg. N., 346; Robinson *v.* Kidd, 59 Pac. R. (Kan.), 863; 62 Pac. R., 705; Arnett's Committee *v.* Owens, 23 Ky. L. R., 1409; 65 S. W. R., 151; McAnan *v.* Tiffin, 143 Mo., 667; 45 S. W. R., 656; Jamison *v.* Culligan, 151 Mo., 410; 52 S. W. R., 224; Gribben *v.* Maxwell, 34 Kans., 8. *Cf. Release*, Tex. Pac. Ry. Co. *v.* Crow, 3 Tex. Civ. App., 266; 22 S. W. R., 928; Alabama & V. Ry. Co. *v.* Jones; 73 Miss., 110; 19 So. R., 105, Ballard *v.* Chicago, R. I. & P. R. R. Co., 70 Mo. App., 108. **Contrary decisions.**—In California a distinction is ingeniously made between the contracts of persons entirely without understanding, which are void, and of persons not entirely without understanding, though without understanding of a particular transaction; in the latter case the deed, though voidable, is not void. Castro *v.* Geil, 42 Pac. R., 804; 110 Cal., 292. And by statute, contracts of insane persons are sometimes void. Payne *v.* Burdette, 84 Mo. App., 332. In Georgia *held*, where the grantor was insane at the time of executing a deed and remained insane till death, the doctrine that the deed is voidable at the election of the grantor has no application. Boynton *v.* Reese, 112 Ga., 354; 37 S. E. R., 437. In Nebraska, the deed is void though not induced by fraud or wrongdoing. Wager *v.* Wagoner, 53 Neb., 511; 73 N. W. R., 937. See also cases holding contracts void: Dewey *v.* Algire, 37 Neb., 6; 55 N. W. Rep., 276; Gingrich *v.* Rogers, 96 N. W. R., 156 (Neb.); German Savs. & Loan Soc. *v.* De Lashmutt, 67 Fed. R., 399; Colorado.—Elder *v.* Schumacher, 18 Col., 433; 33 Pac. R., 175. Alabama.—Wilkinson *v.* Wilkinson, 129 Ala., 279. Massachusetts.—Brigham *v.* Fayerweather, 144 Mass., 48.

[2] Plaster *v.* Rigney, 97 Fed. Rep., 12; 38 C. C. A., 25; Dexter *v.* Hall, 15 Wall (U. S.), 9; and if his deed would be voidable, the deed under the power is also voidable. Williams *v.* Sapieha, 94 Tex., 430; 61 S. W. Rep., 115. *Cf.* Daily Telegraph *v.*

In England, and in a few States of the United States, in order to invalidate a contract because of the insanity of the maker before he is interdicted, in addition to showing his incapacity, it must appear that he *was known* by those who saw and conversed with him to be in a state of mental derangement, or that the person who contracted with him *knew* his incapacity.[1]

In Imperial Loan Co. *v.* Stone[2] (1892) it was held that a party to a contract cannot avoid it on the ground of his insanity at the time he entered into it, unless his insanity was at the time known to the other contracting party. And the burden of proving both the insanity and the knowledge of it by the other contracting party lies upon the party seeking to avoid the contract.[3] This view is not at all universally accepted in the United States; for instance, in Georgia the ignorance of the other contracting party does not make the contract binding on the lunatic or his representatives.[4]

It has been held in Georgia and Alabama that neither ignorance of the insanity on the part of the other contracting party nor the fact that an ordinarily prudent person could not have discovered it makes the contract binding on the lunatic or his representatives,[5] especially if it be an executory contract.[6]

It seems to be established, however, as a general rule of equity in the United States, that where a person in good faith

McLaughlin, [1904] App. Dec. 776; 73 Law J. P. C., 95; 91 Law T., 233; 20 Times Law R., 674 (Eng. H. of L.).

[1] Stockmeyer *v.* Tobin, 139 U. S., 176. In Louisiana this is the statutory rule, Martinez *v.* Moll, 46 Fed. Rep., 724, U. S. Cir. Ct. La., construing Art. 1788, Louisiana Civil Code; Wolf *v.* Edwards, 106 La., 477; 31 So. Rep., 58; Imperial Loan Co. *v.* Stone, 1 Q. B., 599 (Eng.); Memphis Nat. Bank *v.* Sneed 97 Tenn., 120, 36 S. W. Rep., 716 (case of renewal note given by insane maker to replace prior note made by the insane person while competent).

[2] 1 Q. B. (Eng.), 599.

[3] So held in Flaeh *v.* Gottschalk, 41 Atl. R., 908; 88 Md., 368, where the contract was fair and the buyer was a lunatic, the seller was ignorant of the fact and could not be restored to the *status quo*. And in Hardy *v.* Berger, 76 App. Div., 393; 78 N. Y. Supp., 709, the foreclosure of a mortgage was permitted on showing of good faith of mortgagee and his ignorance of mortgagor's insane condition.

[4] Orr *v.* Equitable Mtg. Co., 33 S. E. Rep., 708; 107 Ga., 499; Field *v.* Shorb, 99 Cal., 661; 34 Pac., 504.

[5] Orr *v.* Equitable Mtg. Co., 33 S. E. Rep., 708; 107 Ga., 499 (in this case even though there had been no previous adjudication of incompetency). In Alabama a note given by an insane person, for necessaries, to a payee ignorant of insanity, was held not to bind the estate. Milligan *v.* Pollard, 112 Ala., 465; 20 So. Rep., 620. *Cf.* Walker *v.* Winn, 39 So., 12 (Ala.).

[6] Cundell *v.* Haswell (R. I.), 51 Atl. R., 426 (insane purchaser at execution sale not liable to complete his purchase).

entered into a fair contract with another *apparently sane*, and the contract has been executed and an adequate consideration paid, the contract is voidable only if the consideration can be and is restored by the lunatic or those who represent him, so as to put the parties in *statu quo*.[1]

But where the incompetent has suffered financially by an unfair contract, it will be set aside, without restoration of benefits received.[2]

Who May Avoid Contract.—The insane person, or the committee or other person representing him, or claiming under him,[3] and after his death, his personal representatives, but not the other party to the contract, may elect to avoid it.[4] If the insane person, or those above mentioned and claiming in his right, do not so elect, no one else can plead his insanity to avoid the effect of his contract.[5]

Ratification.—An insane person is no more competent to *ratify* a contract than to make one; therefore, it is no defence to an

[1] See *infra*, p. 368, "Conditions of Avoiding Contracts." Ins. Co. *v.* Hunt, 79 N. Y., 541; Bicknell *v.* Spear, Misc. (N. Y.), 389; 77 N. Y. Supp., 38, 420; Haines *v.* Seott, 35 App. Div. (N. Y.), 515; Gribben *v.* Maxwell, 34 Kans., 8; Young *v.* Stevens, 48 N. H., 133; Brodrib *v.* Brodrib, 56 Cal., 563; Copenroth *v.* Kienby, 83 Ind., 18; Bokemper *v.* Hazen, 96 Iowa, 221; Schaps *v.* Lehner, 54 Minn., 208; Hosler *v.* Beard, 54 Ohio St., 398; Myers *v.* Knabe, 51 Kan., 720; 33 Pac. R., 602; D. M. Smith's Com. *v.* Forsythe, 90 S. W. R., 1075, 28 Ky. L. R., 1034; Rusk *v.* Fenton, 14 Bush, 490; 29 Am. Rep., 413 (Ky.); Parker *v.* Marco, 76 Fed. R., 510; Harrison *v.* Otley, 101 Iowa, 652; 70 N. W. R., 724; Rhodes *v.* Fuller, 139 Mo., 179; 40 S. W. R., 760; Flach *v.* Gottschalk, 88 Md., 368; 41 Atl. R., 908.

[2] Reason *v.* Jones, 119 Mich., 672; 78 N. W. R., 899. Wilkins *v.* Wilkins, 35 Neb., 212; 52 N. W. R., 1109.

[3] Sander *v.* Savage, 75 App. Div., 333; 78 N. Y. Supp., 189. But the wife and children of a grantor cannot during his life question his capacity to convey land, as they have no interest therein presently enforceable. Baldwin *v.* Golde, 88 Hun, 115; 34 N. Y. Supp., 587; *cf.* Hunt *v.* Rabitony, 7 Detroit Leg. News, 447; 84 N. W. R., 59; French Lumbering Co. *v.* Theriault, 107 Wis., 627; 83 N. W. R., 927; 51 L. R. A., 910. The grantee by a deed made after restoration to sanity of the grantor may have set aside a former deed by the grantor made when he was insane. Clay *v.* Hammonds, 199 Ill., 370; 65 N. E. R., 352. The contract of an insane partner does not bind his firm, if the other contracting party knew of his insanity. Schmidt *v.* Ottman, 15 So. Rep., 310; 46 La. Ann., 888.

[4] Bunn *v.* Postell, 33 S. E. Rep., 707; 107 Ga., 490.

[5] Atwell *v.* Jenkins, 40 N. E. Rep., 178; 163 Mass., 362; Mead *v.* Stegall, 77 Ill. App., 679; Warmsley *v.* Darragh, 12 Misc. (N. Y.), 199. Where the mind of one party to a contract has become impaired by age, the contract is no less operative against the party who is in full possession of his faculties. Hannon *v.* Hannon, 51 Fed. Rep., 113. A remainder-man cannot during lifetime of insane life tenant avoid deed of such life tenant with power to convey. McMillin *v.* Wm. Deering Co., 38 N. E. Rep., 398; 139 Ind., 70.

action by his guardian to recover money paid by him, to say that the payment was made by him in settlement of his contract obligation entered into during insanity.[1]

CONTRACTS WITH INSANE PERSONS BEFORE FINDING OF LUNACY, BUT DURING PERIOD COVERED BY FINDING.

A contract executed by one who, *thereafter*, by inquisition in proceedings *de lunatico*, is found to be a lunatic, although made within the period during which he is declared by the finding to have been a lunatic, is not absolutely void, the proceedings are presumptive, not conclusive, evidence of want of capacity, and may be overcome by satisfactory evidence of sanity.[2]

In order to be concluded by the subsequent adjudication, or proceedings thereunder, the other contracting party must be a party thereto.[3]

CONTRACTS FOR NECESSARIES.

A supposed exception to the general rule, that the contracts of insane persons are either void or voidable, is found in the case of contracts for necessaries supplied in good faith to an insane person, and suitable to his rank in life. But the liability is for the reasonable value and not for the agreed price; for instance, a note given by an insane person for necessaries to an ignorant payee has been held not to bind his estate.[4]

[1] Weis *v.* Ahrenbeck, 5 Tex. Civ. App., 542; 24 S. W. Rep., 356. In pleading, an allegation of disaffirmance, either by the guardian during the continuance of the incompeteney or by the incompetent after restoration, is necessary. Louisville, etc., Ry. Co. *v.* Herr, 35 N. E. Rep., 556; 135 Ind., 591.

[2] Hughes *v.* Jones, 116 N. Y., 67, 73, citing Van Deusen *v.* Sweet, 51 N. Y., 378; Banker *v.* Banker, 63 N. Y., 409; Hart *v.* Deamer, 6 Wend., 497; Osterhout *v.* Shoemaker, 3 Hill, 513; 1 Greenleaf on Evidence, sec. 556. But such retroactive findings are now in New York prohibited by Code Civ. Proc., sec. 2335, and are ineffective for any purpose. Matter of Preston, 113 App. Div. (N. Y.), 732. And see also Mott *v.* Mott, 49 N. J. Eq., 192, citing Rice *v.* Peet, 15 Johns. 503; Hicks *v.* Marshall, 3 Hun, 327; Matter of Beckwith, 3 Hun, 443; Mutual Life Ins. Co. *v* Hunt, 79 N. Y., 541; Matter of Morgan, 7 Paige, 236; Westerfield *v.* Jackson, 3 N. Y. State Rep., 353. See Hardy *v.* Berger, 76 App. Div., 393; 78 N. Y. Supp., 709.

[3] Eakin *v.* Hawkins, 37 S. E. Rep., 622 (W. Va.). This view is not universally held; see *infra*, p. 525, *Adjudications of lunacy as evidence.*

[4] Milligan *v.* Pollard (Ala.), 20 So. Rep., 620; so also of a note given to an attorney for services, McKee's Admr. *v.* Pumell, 38 S. W. Rep., 705; 18 Ky. Law Rep., 879. One who lends money on a lunatic's note may recover *so much* as the lunatic uses for necessities or for the protec-

CONDITIONS OF AVOIDING CONTRACTS.

In States where a contract made by an insane person is voidable, as a condition of rescinding the voidable contract or deed the consideration must generally be, if possible, restored.[1] But, provided the contract be a voidable one, and not valid for the reasons above pointed out (the apparent sanity of the maker, his inability to restore the consideration received, and the fairness of the executed contract), where the consideration received by the insane person cannot be restored in kind the contract may still be rescinded without restoration.[2]

In general, a *bona-fide* purchaser, without notice, from the grantee under a voidable deed from a lunatic, acquires good title.[3] And the only remedy of the lunatic or his guardian is to recover the purchase price, and in a proper case, damages, from the grantee of the lunatic.[4]

RATIFICATION AFTER RESTORATION OF COMPETENCY.

After restoration to sanity the former incompetent must elect *within a reasonable time* whether to affirm or disaffirm his voidable

tion and benefit of his estate. First Nat. Bk. *v.* McGinty (Tex. Civ. App.), 69 S. W. R., 495.

This subject will be dealt with below (page 381) in treating of the extra-contractual liability of insane persons for necessaries.

[1] Morris *v.* Gt. Northern Ry. Co. (Minn.), 69 N. W. Rep., 628; Ætna Life Ins. Co. *v.* Sellers (Ind.), 56 N. E. Rep., 97; 154 Ind., 370.

[2] Rea *v.* Bishop (Neb.), 59 N. W. Rep., 555; Creekmore *v.* Baxter (N. C.), 27 S. E. Rep., 994; 121 N. C., 31; Bates *v.* Hyman (Miss.), 28 So. Rep., 567; Feigenbaum *v.* Howe, 32 Misc. R., 514; 66 N. Y. Supp., 378. *Cf.* Ronan *v.* Bluhm, 173 Ill., 277; 50 N. E. R., 694; McKenzie *v.* Donnell, 151 Mo., 461; 52 S. W. R., 222, Jamison *v.* Culligan, 151 Mo., 410; 52 S. W. R., 224; as to necessity of placing third parties who have acquired rights from grantor of deed *in statu quo*, see cases last cited and Eldredge *v.* Palmer, 185 Ill., 618; 57 N. E. R., 770. In Texas, where it is no proved that the lunatic has the proceeds, or their result, in possession, or they have not been spent for necessaries, restoration will not be required. Williams *v.* Sapieha, 94 Tex., 430; 61 S. W. R., 115. In Mississippi, where an insane person bought chattels and gave his note secured by a deed of trust of the chattels, the vendor was allowed only to sell the chattels and not to recover on the note. Bates *v.* Hyman, 28 So. R., 567. For cases showing when the consideration need not be restored see Brown *v.* Cory (Kans. App.), 59 Pac. R., 1097; Gilgallon *v.* Bishop, 46 App. Div. (N. Y.), 350; 61 N. Y. Supp., 467; Sander *v.* Savage, 36 Misc. (N. Y.), 385; 73 N. Y. Supp., 695.

[3] Arnett's Com. *v.* Owens, 23 Ky. L. R., 1409; 65 S. W. R., 151, and cases cited.

[4] Lack *v.* Brecht, 166 Mo., 242; 65 S. W. R., 976.

contract.[1] And his election to affirm may be manifested by his conduct,[2] without an express agreement of ratification; for example, by his retaining and enjoying the consideration.[3] But his ratification must be based on full knowledge, and cannot be predicated of mere silent acquiescence, not inconsistent with ignorance of the transaction.[4] After the death of the incompetent, his personal representative may ratify and his ratification may be implied.[5]

In some States the power of ratification of the incompetent's contracts is accorded to the guardian or committee.[6]

CONTRACTS WITH INSANE PERSONS SUBSEQUENT TO FINDING OF INSANITY.

The effect of insanity upon contracts may be entirely different when a judgment has been had declaring the incompetent to be such. In States where it is provided by statute that, after a finding of an inquisition of insanity, the insane person shall be incapable of making a contract or performing any civil act, an agreement entered into by such a person is absolutely void.

In Carter *v.* Beckwith,[7] the New York Court of Appeals, per Andrews, J., said: "It is well settled that a lunatic whose lunacy has been judicially determined, and for whom a committee has been appointed, is incapable of entering into any contract, and that any contract which he may assume to make while in that situation is absolutely void." The courts will not inquire whether the lunacy in fact continued and existed when the contract was made. The presumption of its continuance is con-

[1] O. & W. Thum Co. *v.* Tloczynski, 114 Mich., 149; 72 N. W. R., 140; Morris *v.* Great Northern Ry. Co., 67 Minn., 74; 69 N. W. Rep., 628; but see Kelly *v.* Burke, 31 So. Rep., 512 (Ala.), where sale of intoxicating liquor to an insane person was held (under a state statute) incapable of ratification in a lucid interval and, therefore, not ratified by acquiescence in such period.

[2] Where after restoration the former incompetent sued his attorney for proceeds of sale, that was a ratification of sale made by attorney during incompetency. Blinn *v.* Schwarz, 63 App. Div., 25; 71 N. Y. Supp., 343, aff'd 177 N. Y., 252.

[3] Whitcomb *v.* Hardy, 73 Minn., 285; 76 N. W. Rep., 29.

[4] Beasley *v.* Beasley, 180 Ill., 163; 54 N. E. R., 187.

[5] Bunn *v.* Postell, 33 S. E. Rep., 707; 107 Ga., 490.

[6] *Infra*, p. 597.

[7] 128 N. Y., 312, 316, citing: Wadsworth *v.* Sharpsteen, 8 N. Y., 388; Lamoureaux *v.* Crosby, 2 Paige, (N. Y.), 422; Hughes *v.* Jones, 116 N. Y., 67.

clusive as to all dealings after the inquisition until it has been superseded.[1] For the purpose of the judicial determination usually is to appoint a committee to care for the lunatic's business and contractual affairs.

Where a finding of insanity has been made in a proceeding instituted for that purpose, its validity cannot be questioned collaterally in an action where the adjudged insanity is relied on. In general, until superseded, it is a bar to all the world, as a judgment *in rem*.[2]

CONTRACTS MADE DURING LUCID INTERVALS.

In the absence of an adjudication of incompetency still remaining in force, a contract made during a lucid interval is valid. By a lucid interval "is not meant a perfect restoration to reason, but a restoration so far as to be able beyond doubt to comprehend and to do the act with such perception, memory, and judgment as to make it a legal act."[3]

[1] People *ex rel.* Smith *v.* Comrs., etc., 100 N. Y., 215; *In re* Otis, 101 N. Y., 580; Brown *v.* Miles, 61 Hun, 453; New England Loan & Trust Co. *v.* Spitler, 54 Kan., 560; 38 Pac. R., 799. But see Reese *v.* Reese, 89 Ga., 645, 15 S. E., 846; McCleary *v.* Barcalow, 6 Ohio Cir. Ct. Rep., 481; see *infra*, title, Restoration to Sanity, p. 59.

[2] In Georgia, the Civil Code (§ 3652) provides that (an adjudged or unadjudged) lunatic cannot contract; this disability was held to extend to drawing a check on a bank, and the bank honoring such check was held liable, though it was ignorant of the lunacy and though the adjudication had been made in another State. American Trust & Banking Co. *v.* Boone, 29 E. E. S., 182; 40 L. R. A., 250; 102 Ga., 202; see also, Kiehne *v.* Wessell, 53 Mo. App., 667; New England Loan and Trust Co. *v.* Spitler, 54 Kan., 560; 38 Pac. Rep., 799; State Bank *v.* Norduff, 2 Kan. App., 55; 43 Pac. Rep., 312. *Per contra*, in Minnesota, where one under guardianship as a lunatic, contract was fair and the guardianship had been practically abandoned, the deed was held valid, though the guardian was not formally discharged. Thorpe *v.* Hanscom, 66 N. W. R., 1; 64 Minn., 201; and in Ohio, where the guardian was appointed to obtain a pension, but the lunatic remained in charge of his property, including a mill, his contract for necessary repairs to the mill at a fair price was enforced. Kimball *v.* Baumgardner, 16 Ohio C. C., 587; see also Topeka Water Supply Co. *v.* Root, 56 Kan., 187; 42 Pac. R., 715; Lower *v.* Schumacher 61 Kan., 625; 60 Pac. R., 538.

[3] Wharton and Stillé, "Med. Jur.," sec. 2. When the court charged that, if one was at times insane but had lucid intervals, during such an interval he could contract, it was held, not error to fail to qualify with the statement that insanity is presumably continuous and that even in a lucid interval a person may not have mind enough to contract. Norman *v.* Georgia Lock Co. (Ga.), 18 S. E. R., 27. See also Van Osdel *v.* Hyee, 46 La. Ann., 387; 15 So. R., 19.

CONTRACTS IN BEHALF OF INSANE PERSONS.

Ordinarily no one can contract in behalf of an insane person so as to bind him[1] except his duly appointed guardian, and he only to a limited extent, for necessaries. This subject is fully treated below (page 381, The Effect of Mental Unsoundness on Liability for Necessaries). By statute in some States the powers of a guardian are so defined as to permit him to ratify his ward's advantageous contracts.[2]

EFFECT OF INSANITY ON AGENCY AND AN AGENT'S CONTRACTS.

Insanity of a principal revokes his agent's authority.[3] An insane person cannot appoint an agent,[4] and if he attempts to, the agent's contracts in his behalf are at least voidable.[5] If, after a principal has become insane, the agent makes an agreement with a person ignorant of the principal's authority, the ignorance ought in law to have precisely the same effect as ignorance in dealing directly with an insane person, of his insanity.[6] This we have already treated of.[7]

EFFECT OF INSANITY UPON PARTNERSHIP.

In England the insanity of a partner will not work a dissolution of the partnership. It is a ground for dissolution only, and if the continuing partner does not avail himself of it, it will be presumed that he is willing to wait to see whether the incapacity of his partner may not prove merely temporary. In some of the United States it has been decided that the insanity of the partner works a dissolution of the partnership. Insanity should not dissolve a partnership. The prevailing opinion is that it only gives a good and sufficient cause for a court of equity to decree a dis-

[1] Bicknell *v.* Spear, 38 Misc. (N. Y.), 389; 77 N. Y. Supp., 920; Mattson *v.* Mattson (Wash.), 69 Pac. R., 1087; Brashears *v.* Frazier, 19 Ky. L. R., 1284; 43 S. W. R., 427.

[2] Page *v.* L. & N. R. Co. (Ala.), 29 So. R., 676. See Lack *v.* Brecht, 166 Mo., 242; 65 S. W. R., 976.

[3] Renfro *v.* City of Waco (Tex. Civ. App.), 33 S. W. R., 766.

[4] Elias *v.* Enterprise B. & L. Asso., 46 S. C., 188; 24 S. E. R., 102.

[5] Plaster *v.* Rigney, 97 Fed. R., 12; 38 C. C. A., 25; Clay *v.* Hammond, 199 Ill., 370; 65 N. E. R., 352.

[6] But see Merritt *v.* Merritt, 43 App. Div. (N. Y.), 68; 59 N. Y. Supp., 357.

[7] *Supra*, p. 365.

solution. If it does dissolve the partnership, it cannot give to the partner not affected with it the right to dissolve arbitrarily or at will. Nor will it dispense with the necessity of a partner joining in the execution of an instrument which must be executed by all the partners.

In the case of Friedburgher *v.* Jaberg, N. Y. Sup. Ct., First District, Special Term, December, 1887;[1] Patterson, Judge, said: "It is claimed by the defendant that under the peculiar circumstances of this case, the actual participation or assent of Stadelmann—one of the partners—was not necessary; that he was insane at the time the assignment was made, and could neither join in its execution nor sanction it. Assuming that the evidence of Dr. Wildman and Dr. Nichols, medical experts, and that of the witnesses who were called to testify to peculiar conduct of the non-assenting partner at or about the time the assignment was made, established the fact that he was *non compos mentis* at that time, did that of itself confer the power upon, and authorize one member of the firm alone to convey the partnership property to a trustee? I am not aware of any case in which this precise question has been presented; but as one of first impression, it seems to me that insanity not declared by inquisition can no more be urged as a reason for dispensing with the assent of the partner than can his incapacity to concur, arising from any other cause, such as absence or serious illness. Insanity does not dissolve partnership. The prevailing opinion is that it only gives a good and sufficient cause for the court of equity to decree a dissolution. If it does not dissolve the partnership, it cannot give the right to the partner not affected with it to dissolve it arbitrarily at will. But the execution of a general assignment operates practically as a dissolution of a firm. But whatever the courts might decide in a case of insanity on inquest and office found, I am not disposed in this case to hold that the insanity authorized one partner to execute the assignment. The disability here seems to have been an acute mania of short duration, for the sufferer was discharged from the asylum within four weeks from the first day of his confinement, and shortly after his release he began suit to set aside his partner's act. It can scarcely be held under an active state of affairs that during this period of incapacity all the power and authority of both parties inhered

[1] 20 Abb. N. C. (N. Y.), 279.

in Jaberg, and that, by reason of the temporary disability, Jaberg became vested by law with the authority to create a trust which placed beyond reach all the assets of the concern and virtually extinguish all the interest of the disabled partner in the business."[1]

In Kent *v.* West[2] it was held that neither a sane partner nor the committee of a lunatic partner, nor both, have power, without authority of court, to continue the partnership business, and that the committee of a lunatic partner has no power to join with the same partner to charge the lunatic's estate for services rendered.

EFFECT OF INSANITY UPON THE CONTRACT OF INSURANCE.

Insanity is no excuse for failure to pay an assessment upon a policy or contract of insurance.[3] Where an insurance policy contains a clause that it shall be avoided by suicide of the insured[4] or by death by his own hand[5] it may become necessary to determine whether the suicide was insane, for unless the policy expressly excepts death by suicide, though insane, suicide when insane is not deemed a breach of its terms.[6] And such insanity is said to exist when the reasoning faculties of the insured are so far impaired that he is not able to understand the moral character, the general nature, consequences, and effect of the act, or is impelled thereto by an insane impulse which he cannot resist.[6]

A State statute prohibiting the inclusion in a policy of a clause exempting liability where the insured shall have "committed suicide," has been construed to mean as well when insane as when sane.[7]

Where the policy contains a clause against "suicide, sane or insane," it is not necessary in order to violate its terms that the

[1] And see Schmidt *v.* Ottman, 46 La. Ann., 888; 15 So., 310; *supra*, p. 364.

[2] 33 App. Div., 112; 53 N. Y. Supp., 244.

[3] Grand Lodge A. O. U. W. *v.* Jesse, 50 Ill. App., 101.

[4] See *infra*, p. 390, for suicide as evidence of insanity.

[5] Central Mutual L. I. Assn. *v.* Anderson, 195 Ill., 135; 62 N. E. R., 838.

[6] Grand Lodge *v.* Wieting, 168 Ill., 408; 48 N. E. Rep., 59.

[7] See Knights Templars' & Masons' Life Indemnity Co. *v.* Jamian, 104 Fed. R., 638; 44 C. C. A., 93, aff'd Supr. Ct. U. S., 187 U. S., 197; 23 Supr. Ct. R., 108; see also Brower *v.* Supreme Lodge, 74 Mo. App., 490.

suicide be conscious of the moral quality of his act, or that he have the will power to resist the suicidal impulse.[1]

Still, the act must be one of suicide and not an accident, for it has been held where the policy contained such a provision that the insured must have had cause to know that the means employed would destroy or endanger life.[2] The *presumption* is that he was conscious of his act.[3] Such a policy is abrogated by suicide, though it be the result of an uncontrollable insane impulse, and though the insured be unable to understand the character and effect of his act.[4] Self-destruction other than accidental, regardless of mental condition, avoids the policy.[5]

Though, as a general rule, a murderer named as beneficiary in a policy on the life of his victim forfeits his interest therein,[6] if such a beneficiary be insane when he commits a homicide, he does not lose the benefit of the insurance.[7]

EFFECT OF INTOXICATION ON CONTRACTS.

A habitual drunkard or a heavy drinker[8] is not incompetent to contract unless at the time of the execution thereof his understanding was clouded or reason dethroned by actual intoxication or insanity.[9]

In States which provide for adjudications of habitual drunkenness, after the appointment of a guardian or committee, the drunkard's deed is void.[10]

[1] Brower *v.* Supreme Lodge, 74 Mo. App., 490; Huff *v.* Sovereign Camp. 85 Mo. App., 96; Manhattan L. Ins. Co. *v.* Beard, 23 Ky. L. R., 174; 66 S. W. R., 35.

[2] Nelson *v.* Equitable Life Ass'n Soc., 73 Ill. App., 133; see for policy avoided by suicide: Dischner *v.* Piqua Mut. Aid Ass'n, 14 S. D., 436; 85 N. W. R., 998.

[3] Dickerson *v.* N. W. Mut. L. I. Co., 200 Ill., 270; 65 N. E. R., 694.

[4] Supreme Court of Honor *v.* Peacock, 91 Ill. App., 632; such a provision is reasonable, *ibid.;* and *a fortiori* a provision limiting the recovery in case of suicide sane or insane, is valid. Scherar *v.* Prudential Ins. Co. (Neb.), 88 N. W. R., 687; Manhattan Life Ins. Co. *v.* Beard, 23 Ky. Law R., 1747; 66 S. W. R., 35; see Latimer *v.* Sovereign Camp Woodmen, 62 S. C., 145 40 S. E. Rep., 155; divided court.

[5] Clarke *v.* Eq. Life Ass., 118 Fed. R., 374 (U. S. C. C. A., Md.); Union Mutual Life Ins. Co. *v.* Payne, 105 Fed., 172; 45 C. C. A., 193.

[6] Schmidt *v.* Northern Life Ass'n, 83 N. W. R., 800 (Iowa); 51 L. Ra., 141.

[7] Holdom *v.* A. O. U. W., 159 Ill., 619; 31 L. R. A., 67; 43 N. E. Rep., 772.

[8] Coombe's Execr. *v.* Carthew, 43 Atl. R., 1057 (N. J.).

[9] Van Wyck *v.* Brasher, 81 N. Y., 260; see McGarvan *v.* Brooks, 16 So. R., 436 (Miss.).

[10] Cockrill *v.* Cockrill, 79 Fed., 143; 92 Fed., 811; 34 C. C. A., 254; Delaplain *v.* Grubb, 44 W. Va., 612; 30 S. E. R., 201.

In Pennsylvania on an inquisition

In general, a contract entered into when the obligor is in such a state of intoxication as deprives him of the exercise of his understanding, is voidable,[1] although the intoxication was voluntary and not procured by the other party. Occasionally such a contract has been held absolutely void.[2]

But it is not a defence to a contract, a note, for example, that the maker was merely so intoxicated as not to be able to give proper attention to it; intoxication is not a defence unless the maker did not know what he was doing.[3]

The contract of an intoxicated person is voidable only at his election, not at the election of the other party.[4]

One who makes a contract while drunk can ratify it when sober, and such ratification may be by conduct inconsistent with an intent to repudiate.[5]

In these respects the rules relating to contracts by insane persons are applicable to contracts by intoxicated persons; there is no difference in principle.[6]

While an instrument procured by fraud, trick, or artifice, or executed by a party in such a mental state as to be incapable of consenting or contracting, may be invalid as between the parties to the transaction, these facts do not always constitute a defence as against an innocent person who is himself free from any fraud or negligence, and who has advanced money or property to another upon the faith of such an instrument.[7]

Intoxication of Railway Passenger.—The intoxication of a passenger raises questions as to the duty and rights of the railway company toward him, for the general discussion of which books on railways and carriers may be consulted. Gen-

of habitual intemperance, the jury is empowered to find how long the person has been a habitual drunkard, and their finding is *primafacie* evidence of incapacity during that time; a vendee who received a conveyance from him during such time is a *person aggrieved* who may under the law traverse the finding. Laws of 1874, May 8; *In re* Sampson, 19 Pa. Co. Ct. R., 1; 5 Pa. Dist. R., 717.

[1] See Hale *v.* Sterp (Colo.), 42 Pac. Rep., 598; Loughead *v.* Coombs Co., 2 Mo. App. Rep., 1017.

[2] Baird *v.* Howard, 36 N. E. Rep., 732; 51 Ohio St., 57· Hunter *v.* Talbard, 34 S. E. Rep. (W. Va.), 737.

[3] Wright *v.* Waller (Ala.), 29 So. Rep., 57; *cf.* Parker *v.* Marco, 76 Fed. Rep., 510.

[4] Lacy *v.* Mann, 59 Kan., 777; 53 Pac. Rep., 754; *cf.* the similar principle with respect to insanity; *supra*, p. 366.

[5] See Smith *v.* Williamson, 8 Utah, 219; 30 Pac. Rep., 753.

[6] See *supra*, pp. 366.

[7] The subject is too complex for treatment here; see Page *v.* Kreky, 137 N. Y., 307; *cf.* Yonn *v.* Lamont, 56 Minn., 216; 57 N. W. R., 478; Cutler *v.* Zollinger, 117 Mo., 92; 22 S. W. R., 895.

erally a carrier may expel a passenger who is drunk and who demeans himself so as to interfere with the comfort of other passengers.[1] And previous intoxication coupled with obscene and indecent behavior has been deemed admissible in evidence in an action for refusal to carry the same person at a subsequent time.[2]

EFFECT OF INSANITY UPON MARRIAGE.

In the "American and English Encyclopædia of Law," Vol. XI., 1st ed., p. 142, the rule is accurately stated that "a person who is so insane as to be incapable of entering into a valid contract concerning property cannot enter into a valid contract of marriage. Mere weakness of understanding will not invalidate a marriage, nor will insanity which does not affect the subject-matter of the contract. The authorities are in conflict as to whether the marriage of an insane person is void *ab initio*, so that it may be impeached collaterally."[3] It is void *ab initio* if one of the parties was an *adjudged* lunatic.[4] And such a marriage cannot be rendered valid by cohabitation after restoration.[5] In New York the marriage of an insane person is valid until directly impeached.[6] And in Missouri, though a statute declares the contracts of insane persons void, a marriage contract is not deemed within the operation of the law.[7]

INSANITY AS GROUND FOR AVOIDING MARRIAGE *AB INITIO*.[8]

In order to annul a marriage for insanity it must be made to appear that the insanity existed at the time of the marriage.[9] When it did so exist it is cause for annulment.[10] In Pennsyl-

[1] Chesapeake & O. Ry. Co. *v.* Saulsberry (Ky.), 66 S. W. R., 1051; Edgerly *v.* Union St. R. Co., 36 Atl. Rep., 558; 67 N. H., 312; or if he falls into a stupor, Hudson *v.* Lynn & B. R. Co. (Mass.), 59 N. E. Rep., 67. As to duty of railroad toward intoxicated passenger, see Roseman *v.* Carolina Central R. Co., 112 N. C., 709; 16 S. E. Rep., 766.

[2] Stevenson *v.* West Seattle L. & I. Co. (Wash.), 60 Pac. R., 51.

[3] See *infra*, p. 598, as to suits by insane persons for divorce.

[4] Sims *v.* Sims, 121 N. C., 297; 28 S. E. Rep., 407; 40 L. R. A., 737; but see *supra*, p. 370, for cases on other contracts, where actual restoration avoided the effect of a previous adjudication of incompetency.

[5] Sims *v.* Sims; *supra*.

[6] Stuckey *v.* Mathes, 24 Hun, 461.

[7] Payne *v.* Burdette, 84 Mo. App., 332.

[8] See Kern *v.* Kern (N. J. Ch.), 26 Atl., 837.

[9] Forman *v.* Forman (Super. Ct. of N. Y.), 24 N. Y. Supp., 917; Nonnemaeher *v.* Nonnemaeher, 159 Pa. St., 634; 28 Atl. Rep., 439; see *infra*, p. 511, title, Evidence.

[10] Pyott *v.* Pyott, 90 Ill. App., 210; aff'd 191 Ill., 280; 61 N. E. Rep., 88.

vania it has been held that the courts have no power to determine the validity of a marriage alleged to be void for lunacy.[1] In Georgia it has been held that the next of kin or heirs-at-law of one of the contracting parties can attack the marriage on the ground of mental incapacity.[2]

INSANITY AS CAUSE FOR DIVORCE.

The policy of different States toward divorces differs very materially, and the causes for divorce are different in different States; they are usually enumerated in statutes, and those causes have from time to time varied in the same State. Insanity has, from time to time, been a *statutory* cause for divorce.[3] It is now a statutory ground of absolute divorce in District of Columbia, Georgia, Idaho, Maine (with limitations), Minnesota (if insanity existed at marriage), Pennsylvania, Utah, Virginia (if insanity existed at marriage), and Washington.[4]

Insanity as a Defence in Divorce Actions.

Though not directly a cause for divorce, insanity may be the underlying cause of some other delinquency which is ground for divorce; in such case it becomes necessary to determine whether the insanity excuses the delinquency.

In England insanity is not a good defence unless lasting and abiding without hope of recovery or amelioration, and mere recurrent or intermittent insanity is no defence.[5]

And though a person sued for divorce on the ground of adultery be subject to delusions, yet if capable nevertheless of understanding the nature of the act committed and its probable consequences, the insanity would be no defence to the petition for divorce.[6]

In New York it was said: "A violation of the marriage contract by an insane husband or wife does not furnish ground for

[1] Pitcairn *v.* Pitcairn, 201 Pa. St., 368; 50 Atl. R., 963.

[2] Medlock *v.* Merritt, 102 Ga., 212; 29 S. E. Rep., 185.

[3] In Kentucky it was held that lunacy is not a ground for a divorce, though it prevents the wife from discharging her conjugal duties. This seems to be the rule in the absence of a statute. Pile *v.* Pile, 94 Ky., 308; 22 S. W., 215 (1893).

[4] See table in "World Almanac," 1908, pp. 498–499.

[5] Hanbury *v.* Hanbury, Probate Div. (1892), 222.

[6] Yarrow *v.* Yarrow, Probate Div. (Eng.), 92.

a dissolution of the marriage. Thus extreme cruelty, if caused by insanity, is not a cause for divorce,[1] and the same rule applies to acts of sexual intercourse between an insane husband or wife and a stranger. Insane delusions on the part of a wife who has committed adultery are no defence to a suit for divorce, where, when committing adultery, she was capable of appreciating the nature of the act and its probable consequences."[2]

Is the insanity of a defendant a bar to an action for divorce, in the absence of a statute?

The Supreme Court of Vermont, in Nichols *v.* Nichols,[3] held that a decree of divorce on the ground of adultery cannot be granted against an insane person. In Ohio, when the defendant was adjudged a lunatic, the divorce suit abated.[4]

To this it may be replied that divorce statutes are meant to relieve parties from intolerable wrong, and the wrong of adultery is none the less intolerable because the party committing it is insane. This view was intimated in England in the Mordaunt case,[5] although that case was decided upon the peculiar construction of the statute. Insanity of either party is now held no bar to a divorce in England, and in this country some States have followed the English rule.[6]

INSANITY AS A GROUND OF SEPARATION.

The distinction between divorce *a vinculo matrimonii* or absolute divorce, and divorce *a mensa et thoro*, or from bed and board, commonly called limited divorce or judicial separation, is still

[1] So also in Pennsylvania, Hansell *v.* Hansell, 13 Pa. Co. Ct. R., 514; 3 Pa. Dist. R., 734.

[2] Stuckey *v.* Mathes, 24 Hun, 461.

[3] 31 Vt., 328; and see also Wray *v.* Wray, 19 Ala., 522, and Broadstreet *v.* Broadstreet, 7 Mass., 474; Mohler *v.* Shank's Est., 61 N. W. R. (Iowa), 981.

[4] Rhode *v.* Rhode, 8 Ohio S. & C. P. Dec., 684.

[5] L. R., 2 P. & M., 103, 109.

[6] Matchen *v.* Matchen, 6 Barr (Pa.), 332. Divorce granted against an insane person for acts committed before he became insane; Iago *v.* Iago, 168 Ill., 339; 48 N. E. Rep., 30. Where desertion was a ground of divorce, and desertion continued for the requisite period before the deserter became insane, his insanity was no defence. Harrigan *v.* Harrigan, 135 Cal., 397; 67 Pac. R., 506. **Effect of adjudication of insanity.**—In Kansas a wife sued a husband for divorce on the ground of desertion; an adjudication of his insanity made prior to the desertion was interposed as a defence. The plaintiff was allowed to show that during his absence in his new residence he was considered sane and had there procured a divorce from his wife on service by publication, and it was held that he could not maintain his defence on the ground of the adjudication alone. Rodgers *v.* Rodgers, 56 Kan., 483; 43 Pac., 779; *cf.* Sims *v.* Sims, 121 N. C., 297; 28 S. E. R., 407, 40 L. R. A., 737.

commonly recognized in the legislation of the several States,[1] and the grounds differ in different States. A separation will usually be decreed on account of insanity.

Insanity as a Defence in Separation Actions.

Separation is granted not necessarily for the fault of a defendant, but often because cohabitation is inexpedient. If, therefore, acts endangering the safety of the plaintiff result from the insanity of the defendant, such insanity is no defence, in jurisdictions where the action can be maintained against an insane person.[2]

INTOXICATION IN ITS RELATION TO MARRIAGE.

Intoxication, like insanity, may have an effect upon the marriage relation in inquiries respecting the capacity to consent to enter the relation; as a cause for divorce, in those States where habitual intemperance constitutes such cause; as a ground of separation; and as a defence where it is the cause of some delinquency which is ground of divorce or separation in the absence of intoxication.

Capacity to Consent.—In Ohio, where a person had been adjudicated incapable of taking care of himself on account of intemperance, it was held only *prima facie* evidence of want of mental capacity to marry.[3]

Habitual Intemperance or Use of Drugs as a Cause of Divorce or Separation.—Habitual intemperance is not a cause for absolute divorce, unless so provided by statute.

In Kentucky a divorce on the ground of habitual intoxication was denied where the wife *knew* at the time of the marriage that the husband was a slave to intoxicants;[4] it was granted to the husband where the wife had been a habitual drunkard for several years before the action.[5]

The principal discussion, where the law permits an absolute divorce for habitual intemperance, has arisen over what consti-

[1] See Bishop on Marriage and Divorce; Stewart on Divorce.

[2] Hanbury *v.* Hanbury (Eng.), Prob. Div. (1892), 222. *Cf.* Pyott *v.* Pyott, 90 Ill. App., 210; aff'd 191 Ill., 280; 61 N. E. R., 88; Kuster *v.* Kuster, 37 Misc. (N. Y.), 136; 74 N. Y. Supp., 853.

[3] McCleary *v.* Barcalow, 6 Ohio Circuit Ct., 481.

[4] Tilton *v.* Tilton, 16 Ky. Law Rep., 538; 29 S. W. Rep., 290.

[5] Crowley *v.* Crowley, 19 Ky. Law Rep., 285; 40 S. W. Rep., 380.

tutes habitual intemperance. Cases cited in the note relate to this question.[1]

THE VALIDITY AND EFFECT OF JUDGMENTS RENDERED AGAINST AN INSANE PERSON.[2]

Generally a judgment entered against a person of unsound mind, whether entered by default, on consent, on after a trial, is not for that reason void, and if otherwise valid it cannot be collaterally questioned;[3] but it is irregular if the insane person was unrepresented by a guardian,[4] and upon application seasonably made to the court which entered it, will be opened.[5] This may

[1] Intoxication once in three weeks; divorce denied: Dennis *v.* Dennis, 68 Conn., 186; 34 L. R. A., 449; 36 Atl. Rep., 34; once to three times each week for four years; divorce granted: Marous *v.* Marous, 86 Ill. App., 597.

In Louisiana repeated acts of drunkenness followed by occasional spells of sobriety and moderate drinking, but with the habit of drinking fixed so that temptation cannot be resisted, have been held to constitute habitual drunkenness, and if it be of such nature as to make it unbearable for husband and wife to live together, it is cause for separation from bed and board. De Lesdernier *v.* De Lesdernier, 45 La. Ann., 1364; 14 So. Rep., 191.

In New York a separation was granted to a wife where the husband was intoxicated a large part of the time, ranging from partial to complete stupor, and had inflicted personal violence on her. Kissam *v.* Kissam, 21 App. Div., 142; 47 N. Y. Supp., 270. Intemperance or intoxication in divorce statutes, refers to intoxication from the use of intoxicating liquors, unless the use of drugs is specifically referred to; thus, in Georgia, it was held not to include a condition resulting from the use of morphine. Ring *v.* Ring, 112 Ga., 854; 38 S. E. Rep., 330.

In Massachusetts gross and confirmed drunkenness, caused by the voluntary and excessive use of opium or other drugs, is a ground for divorce, but the ground must exist at the time of the filing of the libel. Act 1889, c. 447; see *supra*, p. 379. Burt *v.* Burt, 46 N. E. Rep., 622; 168 Mass., 204; see also note to Edwards *v.* State (Tex. Cr. App.), 39 L. R. A., 262.

[2] Classified under contracts because judgments are regarded by law writers as obligations strictly analogous to contracts, and called "contracts of record." See Thomas *v.* Hunsicker, 108 N. C., 720; Weaver *v.* Brennan, 146 Pa. St., 299; Redmond *v.* Peterson, 102 Cal., 595; Bond *v.* Neusehwander, 86 Wis., 391. As to burden of proof of insanity where effort is made to set aside judgment on ground of insanity, see *infra*, p. 556; see *infra*, p. 598, for actions against insane persons; see *infra*, p. 523, for judgments against intoxicated persons; see *infra*. p. 598, for parties to actions against insane persons; see *supra*, p. 379, for judgments against insane persons in matrimonial actions.

[3] Withrow *v.* Smith, 37 W. Va., 757; 17 S. E. Rep., 316; White *v.* Hinton, 3 Wyo., 753; 30 Pac. Rep., 953; Noel *v.* Modern Woodmen, 61 Ill. App., 597; Dunn *v.* Dunn, 114 Cal., 210; 46 Pac. Rep., 5; Chamblee *v.* Broughton, 120 N. C., 170; 27 S. E. Rep., 111.

[4] Harris *v.* Sehlinke, 65 S. W. Rep., 172 (Tex. Civ. App.); but see Wisdom *v.* Shanklin, 74 Mo. App., 428.

[5] For instance, in Indiana, a judgment against one insane, at the time of its entry, though not so adjudicated, will be set aside on application within two years. Judd *v.* Gray, 156 Ind., 278; 59 N. E. R., 849. In Iowa within one year after removal of disability, Code 1873, §§

properly be done on application of his guardian when appointed;[1] and the heirs of an insane person since deceased are not bound by a judgment so rendered against him.[2]

The measure of capacity has been defined by the courts. Where defendant's mind was impaired, but he understood the nature of the legal proceedings, it was held proper to refuse to open judgment against him, at the suit of his heirs.[3]

Application to open such an irregular judgment must be made without unreasonable delay.[4]

If a guardian is duly appointed as provided by law, a judgment against an insane person is of the same force and effect as against any other, and the right to resort to an execution upon a judgment is not generally suspended by the insanity of the judgment debtor.[5]

THE EFFECT OF MENTAL UNSOUNDNESS ON LIABILITY FOR NECESSARIES.

Insane persons are liable for necessaries, independent of express contract.[6]

This rule has been so applied that a man, notwithstanding

3154–62; Hawley *v.* Griffin, 92 N. W. R., 113 (judgment opened at instance of heirs of insane defendant since deceased); *cf.* Glasscock *v.* Tate, 107 Tenn., 486; 64 S. W. Rep., 715.

[1] Butlers *v.* Comyns, 81 Ill. App., 418; Crawford *v.* Thompson, 161 Ill., 161; 43 N. E. Rep., 617; Kent *v.* Kent, 22 Misc. (N. Y.), 403; 50 N. Y. Supp., 339.

[2] Townsend *v.* Price, 53 Pac. Rep., 668; 19 Wash. St., 415. *Cf.* also the following: Judgment void if no guardian *ad litem* appointed, though an attorney appeared for insane person. *Ex parte* Rountree, 51 S. C., 405; 29 S. E. Rep., 66; but see Livingston *v.* Livingston, 56 App. Div. (N. Y.), 484; 67 N. Y. Supp., 789; and also where a guardian had been appointed if he was not made a party: *Ex parte* Kibler, 31 S. E. Rep., 274; 53 S. C., 461. To the same effect: Heff *v.* Cox, 5 Ohio N. P., 413; Taylor *v.* Lovering (Mass.), 50 N. E. Rep., 612; 171 Mass., 303; Gillespie *v.* Gouly, 120 Cal., 515; 52 Pac. Rep., 816; French Lumbering Co. *v.* Theriault, 107 Wis., 627; 51 L. R. A., 910; 83 N. W. Rep., 927; Bicknell *v.* Spear, 38 Misc. R., 389; 77 N. Y. Supp., 920; Mattson *v.* Mattson (Wash.), 69 Pac. R., 1087. Otherwise by statute: Wilkinson Gaddis & Co. *v.* Markert (N. J.), 47 Atl. R., 488; 65 N. J. L., 518.

[3] Spinlock *v.* Noe (Ky.), 43 S. W. Rep., 31; see also Garretson *v.* Hubbard, 81 N. W. Rep., 174; see Hawley *v.* Griffin, 92 N. W. R., 113 (Iowa).

[4] In Illinois, the court, after the end of the term at which a judgment of dismissal was rendered against an insane plaintiff, who was so adjudged after the commencement of the action, refused to open the judgment on the ground of lack of power. Leonard *v. The Times*, 51 Ill. App., 427.

[5] Pollock *v.* Horn, 13 Wash., 626; 43 Pac. Rep., 885.

[6] See *supra*, p. 367, for liability upon contracts for necessaries. Dandurand *v.* Kankakee Co., 96 Ill. App., 464; 63 N. E. Rep., 101; aff'd 196 Ill., 537; 63 N. E. R., 1011; Borum *v.* Bell, 31 So. R. (Ala.), 454.

he has been found to be an idiot from birth, is liable for necessaries for himself, his wife,[1] and children, unless some unfair advantage has been taken of him.[2]

Appointment of Committee.—After the appointment of a guardian, the liability for necessaries is conditioned on the guardian's express request, or his refusal to provide for the ward or those entitled to support by the ward.[3] That services were beneficial to the ward is insufficient, unless they were requested by the guardian, or rendered necessary by the very fact of his failure to provide them. Subject to the supervision of the court appointing him, the guardian has full power and discretion to contract in behalf of the ward for goods and services necessary and suitable to the ward's station in life, and the ward is bound by such contracts the same as a sane person.[4]

[1] See also *infra*, p. 383; Effect on Domestic Relations.

[2] 1 Story Eq. Jur., 307; Barnes *v.* Hathaway, 66 Barb., 452; Stannart *v.* Barns, 63 Vt., 244. But where the marriage is disputed, insanity at the time of marriage would be a defence. Pyott *v.* Pyott, 90 Ill. App., 210; aff'd 191 Ill., 280; 61 N. E. R., 88.

[3] Creagh *v.* Tunstall (Ala.), 12 So. Rep., 713; 1 Story Eq. Jur., 307; Barnes *v.* Hathaway, 66 Barb. (N. Y.), 452; Stannart *v.* Barns, 63 Vt., 244; Kent *v.* West, 33 App. Div. (N. Y.), 112; 53 N. Y. Supp., 244; Brashears *v.* Frazier, 19 Ky. Law R., 1284; 43 S. W. R., 427.

[4] Lewis *v.* Mason, 42 App. Div., 423; 59 N. Y. Supp., 123; Boldman *v.* Leng's Est. (Mich.), 8 Det. Leg. N., 175; 86 N. W. R., 148; *In re* Averill's Est., 133 Cal., 414; 66 Pac. R., 14; see also Masters *v.* Jones (Ind.), 64 N. E. R., 213; Hart *v.* Miller (Ind.), 64 N. E. R., 239.

The liability of the public for the care and maintenance of insane persons is generally regulated by local statutes, which have given rise to numerous disputes on the subjects of cost of maintenance and residence. It is not within the scope of this article to discuss them; see *infra*, p. 607, *et seq.*, "Indigent insane"; see also *infra* as to what is regarded as necessaries; see also vol. iii., p. 578, "Care and Custody of Incompetent Persons"; *cf.* State Hospital *v.* Fountain, 129 N. C., 90; 39 S. E. Rep., 734: Thedford *v.* Reade, 25 Misc. (N. Y.), 490; 54 N. Y. Supp., 1007; Oneida Co. *v.* Bartholomew, 82 Hun (N. Y.), 80; 31 N. Y. Supp., 106.

In some States statutes declare that the relatives of insane persons shall be liable for their care. Superintendents of the Poor *v.* Rabbitt, 57 N. W. Rep., 1084; 99 Mich., 60; State *v.* Sweet, 21 R. I., 87; 41 Atl. Rep., 1011; see Long Island State Hospital *v.* Stuart, 22 Misc. R. (N. Y.), 48; 49 N. Y. Supp., 372; St. Lawrence Hospital *v.* Fowler, 15 Misc. (N. Y.), 165; 37 N. Y. Supp., 16; Hemlock Poor Dist. *v.* Hufford, 8 Kulp. (Pa.), 202; *In re* Kolb's Est., 6 Pa. Dist. Rep., 543; for right to interest on unpaid board at asylum see Western State Hospital *v.* Conier, 99 Va., 702; 40 S. E. R., 52; 3 Va. Sup. Ct. R., 539.

Statutes making the insane person's estate liable for his support are constitutional. *In re* Yturburru's Est., 134 Cal., 567; 66 Pac. R., 729; see for example of such recovery Dandurand *v.* Kankakee Co., 96 Ill. App., 464; 63 N. E. R., 1011; see also Directors of Infirmary *v.* Merkle, 3 Ohio N. P., 169; Palmer *v.* Hudson River St. Hosp. (Kan.), 61 Pac. R., 506; State Hospital *v.* Fountain, 128 N. C., 23; 38 S. E. Rep., 34; see s. p., 129 N. C., 90; 39 S. E. R., 734; Inhab. of Kittery *v.* Dixon, 96 Me.,

By analogy to liability for necessaries, an attorney who represents an insane person, or an inquisition into his sanity, is entitled to compensation from the committee of his property;[1] and witness' fees and attorney's fees on a hearing to determine his restoration are properly payable out of his estate.[2] As are the fees of an attorney, though he be unsuccessful, if his application is in good faith.[3]

THE EFFECT OF INSANITY ON DOMESTIC RELATIONS.

The insanity of a husband, even with appointment of a committee, does not relieve him of his duty to support his wife, nor does it deprive her of her power to bind him for her necessaries, in case he fails to provide them.[4] This so-called "agency of necessity" persists. Accordingly she may procure necessaries and her husband's estate will be liable; or better, she may apply to the court having jurisdiction over his guardian to compel him to make suitable provision.[5]

THE EFFECT OF MENTAL UNSOUNDNESS UPON NON-CONTRACTUAL MATTERS INVOLVING CONSENT OF THE INCOMPETENT.

A valid consent implies a mind capable of appreciating the nature and consequence of the consent. The same principle which invalidates contracts in the interest of a mentally incompetent party is applied wherever consent is required to make an act valid in the law. For instance, where consent makes an act otherwise criminal or wrongful, legal, and the apparent consent is the action of an incompetent mind, the act remains as though no consent had been given. Sexual intercourse with an insane

368; 52 Atl. Rep., 799; Central Ky. Asylum *v.* Penick, 44 S. W. Rep., 92; 19 Ky. Law R., 1583; McNairy Co. *v.* McCoin, 45 S. W. Rep., 1070; 101 Tenn., 74; U. S. *v.* Frizzell, 19 App. (D. C.), 48; see 1 O. L. D., 190, for case where the contract was implied.

[1] *In re* Hardy, 26 App. Div., 164; 27 N. Y. Civ. Pro. Rep., 174; 49 N. Y. Supp., 953; *cf.* Kent *v.* West, 33 App. Div., 112; 53 N. Y. Supp., 244.

[2] Kelly *v.* Kelly, 74 N. W. Rep., 899; 72 Minn., 19.

[3] *In re* Lanier, 68 App. Div., 320; 74 N. Y. Supp., 70; 170 N. Y., 7; 62 N. E. Rep., 761.

[4] *Cf.* also Schelling *v.* Kankakee County, 96 Ill. App., 432, and Swift *v.* Carpenter, 18 R. I., 545; 28 Atl. R., 963; for discussion of the nature and extent of a husband's liability to care for his insane wife see also Central Kentucky, etc., Asylum *v.* Craven, 17 Ky. L. R., 667; 32 S. W. R., 291.

[5] Thedford *v.* Reade, 25 Misc. (N. Y.), 490; 54 Supp., 1007; Hallett *v.* Hallett, 8 Ind. App., 305; 34 N. E. R., 740; Tiffany *v.* Worthington, 96 Iowa, 560; 65 N. W. R., 817.

woman, though she apparently consent, is none the less rape, provided her insanity be known to the defendant.[1]

So also, though an insane person consent to the possession of his funds by another, the other may be guilty of embezzling them.[2]

THE EFFECT OF MENTAL UNSOUNDNESS UPON WILLS AND TESTAMENTS.[3]

TESTAMENTARY CAPACITY—GENERAL PRINCIPLE.

On the whole, no convincing distinction has been made by the courts or text writers between the capacity needful for a valid will and for a contract.[4] "In order to make a valid will, a testator must have sufficient capacity to comprehend the nature of the act he is performing; he must understand the extent of the property of which he is disposing; he must comprehend the relation which he holds to those who have claims upon him, and be capable of making a rational selection among them."[5] But absolutely sound and perfect mental faculties are not requisite.[6]

The stereotyped phrase, which often constitutes a part of the preamble of a will, "being of sound and disposing mind, memory, and understanding," expresses with considerable accuracy the degree of mental competency necessary to make a valid will.[7]

In Illinois it has been said that one whose mind is sound, is of "sound mind and memory" as regards testamentary capacity, although his memory is somewhat impaired.[8]

[1] State *v.* Williams, 149 Mo., 496; 51 S. W. Rep., 88.

[2] Hobbs *v.* People, 183 Ill., 336; 55 N. E. Rep., 692.

[3] The method of making an inquiry into the validity of wills depends on the practice in the particular State in which the controversy is pending, which it is not within the scope of this article to explain. Sometimes the question is raised and determined in an inquiry conducted before a probate court or officer, at other times before a jury in an action, at other times before a jury on special issues framed and submitted to the jury by a court.

[4] Gable *v.* Rauch, 50 S. C., 95; 27 S. E. R., 555, declaring less required; Burdett *v.* Thompson, L. R., 3 P. & D., 72, note, stating the opposite view.

[5] "The Am. and Eng. Encycl. of Law," 1st ed., vol. xi., p. 151; Bennett *v.* Bennett (N. J. Pre. Ct.), 26 Atl. Rep., 573; 50 N. J. Eq., 439; Blough *v.* Parry (Ind.), 43 N. E. Rep., 560; Dean *v.* Phillips, 22 Ky. Law Rep., 1621; 61 S. W. Rep., 10; *In re* Hoyt's Est., 10 Kulp (Pa.), 166; *cf.* Murphy's Exr. *v.* Murphy, 23 Ky. Law R., 1460; 65 S. W. R., 165.

[6] Ring *v.* Lawless, 190 Ill., 520; 60 N. E. R., 881.

[7] See Waugh *v.* Mean, 200 Ill., 298; 65 N. E. R., 713, where *sane* was regarded in an instruction as synonymous with *sound mind and memory.*

[8] Taylor *v.* Pegram, 151 Ill., 106; 37 N. E. Rep., 837.

Idiots.

An idiot, it is agreed on all sides, has no testamentary capacity; though as to what constitutes idiocy there is as much doubt in testamentary as in contractual issues.

Statutory Wills.

In many, if not all, of the States testamentary competency is the subject of statutory definition, but the statutes never in any substantial particular change the general principle above set forth.

In New York.—All persons, except idiots, persons of unsound mind, married women and infants, may devise their real estate by a last will and testament.[1]

Every male person of the age of eighteen years or upward, and every female not being a married woman of the age of sixteen and upward, of sound mind and memory, and no other, may give and bequeath his or her personal estate by will, in writing.[2] Similar statutes have been adopted in other States, the age qualification varying in different States.

DEGREE OF INTELLECT.

In the State of New York it was formerly held under the statute in force that a person of weak mind, "if not an idiot or a lunatic or of unsound mind,"[3] is competent to make a will. Mere imbecility does not incapacitate. The exception in the statute designates persons totally wanting in reason and understanding. An imbecile, of however low degree of mental capacity, has the power of legal assent or will; and the question in each such case is, whether that power was duly exercised.[4]

But the rule is now laid down by the Court of Appeals as

[1] 2 R. S., p. 57, sec. 1.
[2] 2 R. S., p. 60, sec. 21.
[3] 2 R. S., p. 57, sec. 1.
[4] Ct. of Err., 1841, Stewart *v.* Lispenard, 26 Wend., 255 (see dissenting opinion of Clerke, J., in Thompson *v.* Thompson, 21 Barb., 107); Supr. Ct., 1846, Blanchard *v.* Nestle, 3 Den., 37, note; 1852, Person *v.* Warren, 14 Barb., 488. See also Gen. T. 1853, Newhouse *v.* Godwin, 17 *id.*, 236; Osterhout *v.* Shoemaker 3 Hill, 513; and see Petrie *v.* Shoemaker, 24 Wend., 85; Burger *v.* Hill, 1 Bradf., 360. Compare Clark *v.* Sawyer, 2 N. Y. (2 Comst.), 498.

follows: "In law, the only standard as to mental capacity, in all who are not idiots or lunatics, is found in the fact whether the testator was '*compos mentis*' or '*non compos mentis*' as these terms are used in their fixed legal meaning. Such being the rule, the question in every case of probate is, had the testator, as *compos mentis*, capacity to make a will? not, had he capacity to make the will produced? If *compos mentis* he can make any will, however complicated; if *non compos mentis* he can make no will—not the simplest." [1]

In general the principle is that a testator must be of sound and disposing mind and memory so as to be capable of making a testamentary disposition of his property with sense and judgment, in reference to the situation and amount of such property, and to the relative claims of the different persons who are or might be the objects of his bounty. It is essential that the testator should have sufficient capacity to comprehend perfectly the condition of his property, his relations to the persons who were or might have been the objects of his bounty, and the scope and bearings of the provisions of his will, and sufficient active memory to collect in his mind, without prompting, the particulars or elements of the business to be transacted, and to hold them in his mind a sufficient length of time to perceive at least their obvious relation to each other, and to be able to form some rational judgment with relation to them.[2]

If he has this degree of capacity, he is, within the meaning of the statute of wills, a person of sound mind and memory, and is competent,[3] even, it is said, though his mind was so weakened that he could not take care of his estate,[4] and without regard to

[1] Ct. of App., 1862, Delafield *v.* Parish, 25 N. Y., 997, affirming 5 N. Y. Surr. (1 Redf.), 130; 42 Barb., 24; and see Ean *v.* Snyder, 46 Barb., 230; Cayuga Surr. Ct., 1888, Matter of Soule, 22 Abb. N. C., 236; 19 State Rep., 532; 3 N. Y. Supp., 259; White *v.* Ross, 48 State Rep., 599; 20 N. Y. Supp., 521; Buchanan *v.* Belsey, 65 App. Div., 58; 72 N. Y. Supp., 601; citing Delafield *v.* Parish, *supra*. *Cf.* contrary rule as to contracts laid down in Turner *v.* Houpt, 53 N. J. Eq., 526; 33 Atl. R., 28.

[2] Delafield *v.* Parish, *supra*, as explained in 5 N. Y. Surr. (1 Redf.), 204, note; *In re* Townsend's Will, 75 Hun (N. Y.), 593; 27 N. Y. Supp., 603; Ledwith *v.* Claffy, 18 App. Div., 115; 45 N. Y. Supp., 612.

[3] N. Y. Surr. Ct., 1879, La Bau *v.* Vanderbilt, 3 Redf., 384, 436, citing 25 N. Y., 9, 35 *id.*, 70; *id.*, 559; 60 Barb., 69; Snyder *v.* Sherman, 23 Hun, 139. See also Matter of Murphy, 41 App. Div., 153. *In re* Iredale's Will, 53 App. Div., 45; 65 N. Y. Supp., 533.

[4] *In re* Johnson's Will (Surr.), 7 Misc. R. (N. Y.), 220; 27 N. Y. Supp., 649.

his previous condition,[1] and though the testator was subject to periods of insanity,[2] both before and after.[3]

The true test of testamentary capacity is the competency of the testator to understand and comprehend the act, in relation to his property, to the natural objects of his bounty,[4] and those whom he desires to make objects of his bounty.[5]

In England.

Sir James Hannen said, "The testator must have a memory to recall the several persons who may be fitting objects of his bounty, and understanding to comprehend their relationship to himself and their claim upon him. . . . Whatever degree of mental soundness is required for . . . responsibility for crime, capacity to marry, capacity to contract, capacity to give evidence as a witness—the highest degree of all, if degrees there be, is required in order to constitute capacity to make a testamentary disposition . . . because it involves a larger and wider survey of facts and things than any one of those matters."[6]

And in another case in charging the jury he explained this as follows:

"I never said that it requires a greater degree of soundness of mind to make a will than to do any other act. . . . What I have said . . . is, that if you are at liberty to draw distinctions between various degrees of soundness of mind, then whatever is the highest degree of soundness is required to make a will.[7] That is very different. . . . From the character of the act, it requires the consideration of a larger variety of circumstances than is required in other acts, for it involves the reflection upon the claims of the several persons who, by nature or through other circumstances, may be supposed to have claims on the testator's

[1] *In re* Hall's Will (Surr.), 5 Misc. R. (N. Y.), 461; 24 N. Y. Supp., 864.

[2] *In re* Snelling's Will (Surr.), 78 Hun (N. Y.), 211; 28 N. Y. Supp., 942.

[3] Claffey *v.* Ledwith (N. J. Prc.), 38 Atl. Rep., 433; 56 N. J. Eq., 333.

[4] Ct. of App., 1881, Swenarton *v.* Hancock, 9 Abb. N. C., 326; Abstr. s. c., 84 N. Y., 653, reversing 22 Hun, 38; *In re* Blair's Will, 16 Daly (N. Y. Com. Pl.), 540; *In re* Wheeler's Will, 56 N. Y. State Rep., 709; *In re* Brommer's Will, 60 *id.*, 234.

[5] Howe *v.* Richards (Iowa), 83 N. W. Rep., 909.

[6] Boughton *v.* Knight, L. R. 3 P. and D., 64, 72.

[7] *Cf.* Gable *v.* Rauch, 27 S. E. Rep., 555; 50 S. C., 95; where after defining testamentary capacity the trial court added that less mental capacity was required to make a will than a contract.

bounty, and the power of considering these several claims and of determining in what proportions the property shall be divided amongst the claimants."[1]

In the United States Generally.

The courts of the United States all apply much the same tests as the courts of New York and England. The testator must undoubtedly retain sufficient active memory to collect in his mind, without prompting, particulars or elements of the business to be transacted, and to hold them in his mind a sufficient length of time to perceive at least their obvious relations to each other, and be able to form some rational judgment in relation to them. The elements of such a judgment should be the number of his children, their deserts, with reference to conduct and capacity, as well as need, and what he had done before for them, relatively to each other, and the amount and condition of his property; with some other things, perhaps.[2]

The testator must possess an understanding of the business in which he is engaged in making the will,[3] a recollection of the property he means to dispose of, of the persons who are the objects of his bounty, and the manner in which it is to be distributed among them. It is not necessary that the testator should view his will with the eye of a lawyer and comprehend its provisions in the legal form. It is sufficient if he has such mind and memory as will enable him to understand the elements of which it is composed—the disposition of his property in the simplest form.[4]

Demonstrated ability to manage business matters may be proof of capacity to make a will. On the other hand, competency to engage in, or understand or control complicated, habitual,[5] or even ordinary[6] business matters or transactions is not the final test of testamentary capacity, but an understanding of the business in which the testator is engaged when he prepares and executes his will, the persons who are the natural objects of

[1] Sir James Hannen in Burdett *v.* Thompson, L. R. 3 P. and D., 72, note. And see Banks *v.* Goodfellow, L. R. 5 Q. B., 549.

[2] Converse *v.* Converse, 21 Vt., 168.

[3] Appeal of Sturdevant, 71 Conn., 392; 42 Atl. R., 70.

[4] Harrison *v.* Rowan, 3 Wash. C. C., 580.

[5] Crossan *v.* Crossan, 70 S. W. R., 136 (Mo.).

[6] Ring *v.* Lawless, 190 Ill., 520; 60 N. E. R., 881; Waugh *v.* Moan, 200 Ill., 298; 65 N. E. R., 713.

his bounty, and the manner in which he desires the disposition to take effect.[1]

The test of testamentary capacity is whether the testator could comprehend reasonably the condition of his property, his relations to the object of his bounty, and the scope and bearing of his will, and whether he had sufficient active memory to collect in his mind, without prompting, the particulars or elements of the business to be transacted, and hold them a sufficient length of time to perceive at least their obvious relations to each other and form a rational judgment concerning them.[2]

A person capable of comprehending his property, the natural objects of his bounty, and the disposition he has determined to make of his property, may make a valid will, although he is of very moderate capacity,[3] or is erratic or eccentric[4] or subject to melancholy.[5]

A testator able to comprehend his property, the natural ob-

[1] Maddox *v.* Maddox, 21 S. W. Rep., 499; 114 Mo., 35; see also Keithley *v.* Stafford, 126 Ill., 507; 18 N. E. Rep., 740; Perkins *v.* Perkins (Iowa), 90 N. W. R., 55; Dunaway *v.* Smoot (Ky.), 67 S. W. R., 62. *Cf.* Green *v.* Green (Ill. Sup.), 33 N. E. Rep., 941; 145 Ill., 264; see also as example of overstatement of testamentary capacity by including an understanding of all testator had previously done for the objects of his bounty, Couch *v.* Gentry, 20 S. W. Rep., 89: 113 Mo., 248. Sinnet *v.* Bowman, 37 N. E. Rep., 885; see *in re* Cameron's Est. (Pa. Orph. Ct.), 14 Pa. Co. Ct. R., 247; *id.* 3 Pa. Dist. R., 101, where a demonstrated business shrewdness, taken in connection with other evidence of intelligence, were held to establish testamentary capacity. Appeal of Turner, 72 Conn., 305; 44 Atl. R., 310; see Von de Veld *v.* Judy (Mo.), 44 S. W. Rep., 1117, incompetency to do business not testamentary incapacity; Petefish *v.* Becker, 176 Ill., 448; 52 N. E. R., 71.

[2] *In re* Pitt's Estate (Wis.), 55 N. W., 149; Martin *v.* Thayer, 37 W. Va., 38; 16 S. E., 489; Couch *v.* Gentry, 113 Mo., 248; 20 S. W., 89; Bulger *v.* Ross, 98 Ala., 267; 12 So., 803; Whitney *v.* Twombly, 136 Mass., 145; Cline *v.* Lindsay, 110 Ind., 337; see also to the same effect substantially, though phrased in other words, Hampton *v.* Westcott, 49 N. J. Eq., 522; 25 Atl. Rep., 254; Pooler *v.* Cristman, 34 N. E. Rep., 57; 145 Ill., 405; Burney *v.* Torrey (Ala.), 14 So. Rep., 685; Howat *v.* Howat's Exr., 41 S. W. Rep., 771; 19 Ky. Law R., 756; Bower *v.* Bower, 45 N. E. Rep., 595; 146 Ind., 393; King *v.* King, 42 S. W. Rep., 347; 19 Ky. Law Rep., 868; Howe *v.* Richards, 83 N. W. Rep. (Iowa), 909; Pritchard *v.* Henderson, 3 Pennewill (Del.) 128; 50 Atl. R., 217; Ketteman *v.* Metzger, 23 Ohio C. C. R., 61; Berry *v.* Safe Dep. & Tr. Co. (Md.), 53 Atl. R., 720.

[3] Howell *v.* Taylor (N. J. Prerog. Ct.), 50 N. J. Eq. (5 Dick.), 428; 26 Atl., 566; Bennett *v.* Bennett (N. J. Prerog. Ct.), 50 N. J. Eq. (5 Dick.), 439; 26 Atl., 573.

[4] Farnum *v.* Boyd, 56 N. J. Eq., 766; 41 Atl. R., 422; Pilkington *v.* Gray, 68 L. J. P. C., 63 (Eng.); App. Cas., [1899] 401; Ketteman *v.* Metzger, 23 Ohio C. C., 61; *In re* Wright's Est. (Pa.), 51 Atl. R., 1031.

[5] *In re* Reed's Est. (Minn.), 90 N. W. R., 319.

jects of his bounty, the meaning of the business in which he is engaged, and the relation of each of these factors to the other, and the disposition made by his will, possesses testamentary capacity, although he is infirm of body and there is some abatement of his intellectual vigor.[1]

Actual knowledge of the extent of the property is not the measure, but capacity to understand the extent and the objects of testator's bounty.[2] Consequently it does not necessarily show testamentary incapacity that testatrix overstated the amount of her property in the will.[3]

The ability to comprehend testator's property may co-exist with actual ignorance; therefore ignorance, to amount to lack of testamentary capacity, must be ignorance resulting from lack of mental capacity to comprehend.[4]

And suicide, after repeated attempts, is not inconsistent with testamentary capacity.[5] Nor is monomania necessarily inconsistent with such capacity.[6] Nor absent-mindedness and brooding.[7]

Because a testator's mind may be in a partial sense unsound and yet not incapacitate him from making a will, an instruction which stated that mental unsoundness embraces every species of mental incapacity from raging mania to delicate and extreme feebleness of mind, has been held erroneous. Such an instruction may correctly describe the bounds of mental unsoundness in

[1] Westcott *v.* Sheppard, 51 N. J. Eq. (6 Dick.), 315. To same effect Green *v.* Green, 145 Ill., 264; 33 N. E., 941; Taylor *v.* Pegram, 151 Ill., 106; Francis *v.* Wilkinson, 147 Ill., 370; Prentiss *v.* Bates, 88 Mich., 567; O'Connor *v.* Madison, 98 Mich., 183; *In re* Douglass Est., 162 Pa., 567; Maddox *v.* Maddox, 114 Mo., 35; 21 S. W., 499; Norton *v.* Paxton, 110 Mo., 456; *In re* Hoover, 19 D. C., 495; Potter *v.* Jones, 20 Or., 239; Wallis *v.* Luhring, 134 Ind., 447; 34 N. E., 231; Carpenter *v.* Bailey, 94 Cal., 406; Trezevant *v.* Rains, 85 Tex., 329; 19 S. W., 567. In Alabama it was held to be an error to instruct a jury that testamentary capacity required sufficient mind and memory to understand the testator's obligations, if any, toward any person, on the ground that it gave undue prominence to obligations, the breach of which would not show want of testamentary capacity. Bulger *v.* Ross, 12 So. Rep., 803.

[2] Roller *v.* Kling, 49 N. E. Rep., 948; 150 Ind., 59. Accordingly it was not error to modify a request that testator must have a clear recollection of his property by striking out "clear"; Kischman *v.* Scott, 166 Mo., 214; 65 S. W. R., 1031.

[3] Waugh *v.* Moan, 200 Ill., 298; 65 N. E. R., 713.

[4] *In re* Livingston's Will (N. J.), 37 Atl. Rep., 770.

[5] Koegel *v.* Egner (N. J.), 54 N. J. Eq., 623; 35 Atl. Rep., 394; see further on suicide *infra*, p. 549, p. 556.

[6] Young *v.* Miller, 145 Ind., 652; 44 N. E. Rep., 757.

[7] Ouachita Baptist College *v.* Scott, 64 Ark., 349; 42 S. W. Rep., 536.

its widest sense, but it is not a true measure of mental unsoundness as applied to testamentary capacity.[1]

When Testator Must be Competent.

The state of testator's mind at the time he published and declared his will is the only question at issue when his capacity is challenged.[2] If a testator re-publishes a will by a codicil, and it be determined that he was of sufficient testamentary capacity to make the codicil at the time he made it, it becomes immaterial whether he was of sufficient capacity to make the will at the time he executed it.[3]

When mental capacity at the time of the execution of will or codicil is the question, condition at another time may perhaps be competent evidence upon that issue.[4]

Duty of Court to Instruct the Jury.

The court should define to the jury testamentary mental competency, though it is not necessary that the court should go further and elaborately explain what is not such competency.[5] But it is error for the court, on an issue of testamentary capacity, to fail to give a clear and careful definition of testamentary competency.[6]

EFFECT OF ADJUDICATION OF INSANITY ON CAPACITY TO MAKE A WILL.

One under guardianship for insanity is *prima facie* incapable of making a will.[7] But the appointment of a guardian is not

[1] Heseman *v.* Vogt, 181 Ill., 400; 55 N. E. R., 151; and it is error to give such an instruction as may lead the jury to believe that partial insanity will itself avoid a will. *In re* Evans' Est. (Iowa), 86 N. W. R., 283.

[2] *In re* Hoyt's Est., 10 Kulp (Pa.), 166; Von de Veld *v.* Judy (Mo.), 44 S. W. R., 1117; Smith *v.* Day (Del.) 45 Atl. R., 396; *In re* King's Will, 29 Misc. (N. Y.), 268; 61 Supp., 238. Buchanan *v.* Belsey, 65 App. Div. (N. Y.), 58; 72 Supp., 601; Pritchard *v.* Henderson, 3 Penne. (Del.), 128; 50 Atl. R., 217; James White Memorial Home *v.* Haeg, 68 N. E. R., 568; 204 Ill., 422.

[3] *In re* Journeay's Will, 15 App. Div. (N. Y.), 567; 44 N. Y. Supp., 548, aff'd 162 N. Y. 611, 646; 57 N. E. Rep., 1113. *Cf. in re* Nelson's Est., 132 Cal., 182; 64 Pac. R., 294, where the codicil was made three days after the previous will.

[4] *Infra*, p. 510.

[5] Dean *v.* Phillips, 22 Ky. Law Rep., 1621; 61 S. W. Rep., 10.

[6] *In re* Evans' Est. (Iowa), 86 N. W. R., 283; Spencer *v.* Terry's Est., (Mich.), 8 Det. Leg. N., 392; 86 N. W. R., 998.

[7] *In re* Fenton's Will, 66 N. W. Rep., 99; 97 Iowa, 192; see *in re* Widmayer's Will, 34 Misc. R., 439; 69 N. Y. Supp., 1014.

conclusive evidence of want of testamentary capacity.[1] The statutes which declare a person adjudged a lunatic incapable of contracting do not go so far as to declare him incompetent to make a will. A will may be made during a lucid interval, provided the testator then has a mind answering the measure of mental competency, notwithstanding adjudged incompeteney.[2]

Revocation of Will.

The capacity to revoke is substantially the same as the capacity to make; it requires a full and intelligent knowledge of testator's property, of those naturally entitled to his bounty, and of the nature of the act,[2] and such capacity may exist, though one has not capacity to make contracts and is under guardianship.[3]

The Character of the Will Does not Necessarily Determine its Validity Even if Unreasonable or Unjust.

Where a testator has mind and memory to understand his property and his relations to other persons, his will must stand, and it is not sufficient to impeach his competency that the will is not such in all respects as might have been expected.[4]

The fact that the will is unreasonable or unjust on its face,[5]

[1] See *in re* Evans' Will, 37 Misc. R., 337; 75 N. Y. Supp., 491; also Barbey *v.* Boardman, 202 Pa. St., 185; 51 Atl. R., 756 (will valid, though testator had been attaeked with paresis, and adjudged ineompetent, but the adjudieation vaeated).

[2] Matter of Goldsticker, 192 N. Y., 35.

[3] Linkmeyer *v.* Brandt, 77 N. W. Rep., 493; 107 Iowa, 750.

[4] N. Y. Supr. Ct., 1859, Watson *v.* Donnelly, 28 Barb., 653; Bennett *v.* Hibbert, 88 Iowa, 154; 55 N. W., 93; Morris *v.* Morton's Exrs., 14 Ky. Law R., 360; 20 S. W. Rep., 287. Therefore it is not proper to submit to the jury the question whether the will is unnatural or unjust, Sharp *v.* Merriman (Mich.), 66 N. W. Rep., 372; or is reasonable and proper, Heseman *v.* Vogt, 181 Ill., 400; 55 N. E. R., 151; Wilson *v.* Hay's Exr., 22 Ky. Law Rep., 897; 58 S. W. Rep., 773; Daly *v.* Daly, 183 Ill., 269; 55 N. E. R., 671. Or whether, if the distribution is directed according to the fixed purpose of the testator, that purpose is rational. Warren's Devisees *v.* O'Connell, 23 Ky. Law R., 260; 62 S. W. R., 890.

[5] N. Y. Chan., 1828, Clark *v.* Fisher, 1 Paige, 171; N. Y. Supr. Ct., 1863; Gamble *v.* Gamble, 39 Barb., 373; N. Y. Ct. of App., 1868, Jackson *v.* Jackson, 39 N. Y., 153, reversing 1 Tuck., 259; Hallenbeck *v.* Cook, 180 Ill., 65; 54 N. E. Rep., 154; *In re* Finn's Est., 1 Misc. (N. Y. Surr.), 280; 22 N. Y. Supp., 1066; Bennett *v.* Bennett (N. J. Prerog.), 26 Atl. Rep., 573; 50 N. J. Eq., 439; Trezevant *v.* Rains (Tex. Civ. App.), 25 S. W. Rep., 1092; *In re* Skaat's Will, 74 Hun, 462; 26 N. Y. Supp., 494; *In re* Trieh's Will, 165 Pa. St., 586; 30 Atl. Rep., 1053; McClary *v.* Stull, 62 N. W. Rep., 501; 44 Neb.,

or capricious,[1] when taken in connection with the amount of property and situation of relatives, is not alone sufficient to avoid the will.[2]

Thus, a gift of one dollar to children, coupled with an explanation that they had received their share during testator's lifetime, is no reason at all for setting aside a will.[3]

A codicil made by an old man disinheriting a child is valid when it was the voluntary act of a competent mind. The fact of disinheritance is not of itself sufficient to prove the deceased incompetent.[4]

Unequal partition of property, or leaving the same to strangers on whom the testator has depended, does not necessarily show incapacity. The fact that the testatrix was a woman of advanced age, somewhat enfeebled in body and mind, and that she gave her property to strangers instead of collateral relatives from motives of gratitude or personal attachment, does not show want of testamentary capacity or undue influence, so long as her mental powers enabled her to understand and appreciate the amount and condition of her property and to comprehend the nature and consequences of her act in executing the will.[5]

Where testatrix executed two wills within ten days of her death, and when she was in feeble condition and very sick, and by the first she made her husband the sole beneficiary, but by the last he was given only some furniture and the residue of the estate was left to one upon whom she had been accustomed to rely in the management of her affairs, she having had trouble with her husband—*held*, that she being of testamentary capacity and free from undue influence, the second will should stand.[6]

Where a provision was made for masses for the dead, to the

175; Farmer *v.* Farmer, 31 S. W. Rep., 926; 129 Mo., 530; *In re* Lang's Will, 9 Misc. Rep. (N. Y.), 521; 30 N. Y. Supp., 388; Ellis *v.* Ellis, 20 Ky. Law R., 438; 46 S. W. Rep., 521; Cutler *v.* Cutler, 103 Wis., 258; 79 N. W. Rep., 240.

[1] *In re* Kaufman's Est., 117 Cal., 288; 49 Pac. Rep., 192.

[2] See note 5, p. 392.

[3] Entwistle *v.* Meikle, 180 Ill., 9; 54 N. E. Rep., 217.

[4] Jefferson Surr. Ct., 1863, Clarke *v.* Davis, 5 N. Y. Surr. (1 Redf.), 249, citing 30 Barb., 134; Hall *v.* Perry, 87 Me., 569; 33 Atl. Rep., 160. Nor is mere singularity of the provisions. Coffin *v.* Coffin, 23 N. Y., 9; Matter of Finn, 54 N. Y. State Rep., 301; McLaughlin Will, 2 Redf., 504.

[5] Matter of Snelling, 136 N. Y., 515; 49 State Rep., 695, citing Horn *v.* Pullman, 72 N. Y., 276; Clapp *v.* Fullerton, 34 *id.*, 190; Hollis *v.* Drew Theologieal Seminary, 95 *id.*, 166; Marx *v.* McGlynn, 88 *id.*, 370.

[6] Matter of Clark, 5 Misc., 68, citing Matter of Green, 67 Hun, 527; Matter of Williams, 46 State Rep., 775.

exclusion of relatives, the court directed a verdict establishing the will, saying that whether any or how much good the disposition would do is not a question for judge or jury.[1]

Unreasonable or Unnatural Provisions in a Will May Be Evidence of Mental Defect.

Where a will is in fact contrary to the dictates of the natural affections and is unnatural in its dispositions, its provisions are evidence of mental defect, obliquity, or perversity of mind which may,[2] together with other evidence,[3] establish incapacity.[4]

Delusions—Insane Delusions or Hallucinations May Incapacitate.

In respect to testamentary capacity, aside from cases of dementia or loss of mind and intellect, the true test of insanity is mental delusion[5] or hallucination.[6]

Mistaken Belief or Unjustifiable Ill-Feeling.—The will is not invalid because its terms are the result of a mistaken belief, provided that belief is not an insane delusion; even where it is based upon an erroneous belief that the natural object of testator's bounty had been guilty of an act of which he was innocent,[7] or is hostile to testator,[8] or is planning to get his property,[9] or that his wife's child is not his own.[10] But other-

[1] Martin *v.* Bowdoin, 158 Mo., 379; 59 S. W. R., 227.

[2] Matter of Budlong, 126 N. Y., 423; s. c., 38 State Rep., 436; Lamb *v.* Lamb, 105 Ind., 456; Caldwell *v.* Anderson, 104 Pa. St., 199.

[3] Manatt *v.* Scott, 106 Iowa, 203; 76 N. W. Rep., 717; Howe *v.* Richards (Iowa), 83 N. W. Rep., 909; Henrich *v.* Saier (Mich.), 82 N. W. Rep., 879; but only in connection with other evidence, Kaenders *v.* Montague, 180 Ill., 300; 54 N. E. Rep., 321.

[4] Howe *v.* Richards (Iowa), 83 N. W. Rep., 909; Pergason *v.* Etcherson, 91 Ga., 785; 18 S. E. Rep., 29; *infra*, p. 516; Sim *v.* Russell, 90 Iowa, 656; 57 N. W. Rep., 601; Henrich *v.* Saier (Mich.), 82 N. W. Rep., 879.

[5] N. Y. Ct. of App., 1865, Seamen's Friend Society *v.* Hopper, 33 N. Y., 619, affirming 4 Barb., 625, citing 3 Add. Eec. R., 79.

[6] N. Y. Supm. Ct., 1869, Matter of Foreman, 54 Barb., 274, affirming 1 Tuck., 205.

[7] Martin *v.* Thayer, 37 W. Va., 38; 16 S. E. Rep., 489; O'Dea's Will, 84 Hun (N. Y.), 591; 33 N. Y. Supp., 463; *In re* Kendrick's Est., 130 Cal., 360; 62 Pac. R., 605.

[8] *In re* Ruffino's Est., 116 Cal., 304; 48 Pac. Rep., 127.

[9] Skinner *v.* Lewis (Or.), 67 Pac. R., 951.

[10] *In re* Smith's Will (Surr.), 24 N. Y. Supp., 928; but where there is some evidence tending to show that such a mistaken belief is due to an insane delusion, the jury should be instructed upon the effect as well of an insane delusion as of a mistaken belief, Layer *v.* Layer, 22 Ky. Law Rep., 1936; 62 S. W. Rep., 15.

wise where the mistaken belief was an insane delusion.[1] In such cases the question is not whether the foundations of the belief are true or false, or whether the circumstances are or are not misleading, but whether they are of such character as might fairly have induced the belief in a rational mind.[2]

A mistaken or false belief is not insanity nor is it necessarily an insane delusion;[3] nor is unjustified ill-feeling toward the natural objects of testator's bounty;[4] nor an unreasonable prejudice; nor an absurd mistake of fact.[5]

What are Insane Delusions; Insane Delusions and Mistaken Belief Contrasted.—The difference between an insane delusion and a mistaken belief is illustrated in Haines *v.* Hayden (Mich.),[6] where the jury were instructed that "a person persistently believing supposed facts which have no real existence against all evidence and probability, and conducting himself on the assumption of their existence, is, so far as such facts are concerned, under an insane delusion."

In Connecticut an insane delusion was defined as a false belief for which there is no reasonable foundation, and which would be incredible under the given circumstances to the same person if of sound mind, and concerning which the mind was not open to permanent correction through evidence or argument; it was also said that it is only where false beliefs are such as a reasonable man would not under the circumstances entertain, that they become insane delusions.[7]

There may be an insane delusion, though the belief is not an impossibility; if such belief is entertained against all evidence and probability and after argument to the contrary, it may be inferred that the person is suffering from an insane delusion.[8]

[1] See *in re* Gannon's Will, 2 Mise. Rep. (N. Y.), 329; 21 N. Y. Supp., 931; *infra*, p. 397, note 2; O'Dea's Will, 84 Hun (N. Y.) 591, *supra*, p. 394, note 1.

[2] *In re* Bennett's Est., 201 Pa., 485; 51 Atl. R., 336; 10 Pa. Dist. R., 145.

[3] *In re* Lang's Will (Surr.), 9 Mise. Rep. N. Y., 30; Appeal of Kimberly, 68 Conn., 428; 36 Atl. R., 847; 37 L. R. A., 261, 275; *In re* Kendriek's Est., 130 Cal., 360; 62 Pae. R., 605. See Bain *v.* Cline, 24 Or., 175; 33 Pae. R., 542; *In re* Hemingway's Est., 7 North. Co. R. (Pa.), 93.

[4] *In re* Suydam's Will, 84 Hun, 514; 32 N. Y. Supp., 449.

[5] *In re* Oberdorf's Est., 2 Laek. Leg. N., 43.

[6] 54 N. W. R., 911; see also *supra*, p. 394, "*Mistaken belief.*"

[7] Appeal of Kimberly, 68 Conn., 428; 36 Atl. Rep., 847; 37 L. R. A., 261.

[8] Medill *v.* Snyder, 61 Kan., 15; 58 Pac. R., 962.

In Pennsylvania it was said that an insane delusion must be that something exists which does not exist, and which no rational person in the absence of evidence would have believed existed.[1]

And, in California, where the evidence showed that testatrix was not fully convinced of the truth of an unjustified suspicion which she entertained, it was held proper to find therefrom that her suspicion, though groundless and unreasonable, was not an insane delusion.[2] And where it did not appear how a testatrix had acquired her belief, or that she had ever been reasoned with about it to convince her of its falsity, the belief, it was said, could not be deemed an insane delusion, because an insane delusion is the spontaneous production of a diseased mind so firmly fixed that neither argument nor evidence can convince to the contrary.[3]

Where the facts show some ground for the belief, though slight, it is not an insane delusion;[4] and, it is said, that where an instruction to a jury fails to distinguish between a mistaken belief and an insane delusion, and thereby confuses them, or omits to indicate that an insane delusion is created without, and adhered to against, reason and evidence, it is error.[5]

A simulated opinion or fleeting vagary is not an insane delusion.[6]

The existence of an insane delusion is not shown by evidence that testator's sentiments toward a relative underwent a sudden change, changing to fear and dislike,[7] nor by evidence showing a dislike for cause, even though it be accompanied by denunciation of testator's son as a bastard.[8]

The Delusion Must Affect the Will.—The delusion or hallucination will not establish incapacity unless it relates to the persons or objects affected by the will,[9] or to his property

[1] *In re* Hemingway's Est., 7 North. Co. R., 93 (Orphs.' Ct.); 195 Pa. St., 91; 45 Atl. R., 726.

[2] *In re* Scott's Est., 128 Cal., 57; 67 Pac. R., 527.

[3] *In re* Kendrick's Will, 130 Cal., 360; 62 Pac. R., 605.

[4] *Ibid.;* Buchanan *v.* Belsey, 65 App. Div., 58; 72 N. Y. Supp., 601; *In re* Brush's Will, 35 Misc. R. (N. Y.), 689; 72 N. Y. Supp., 421.

[5] *In re* Kendrick's Will, *supra.*

[6] *In re* Redfield's Est., 116 Cal., 637; 48 Pac. R., 794.

[7] *In re* McGovern's Est., 185 Pa. St., 203; 39 Atl. Rep., 816.

[8] Dobie *v.* Armstrong, 160 N. Y., 584; 55 N. E. Rep., 302, affg., 27 App. Div., 520; 50 N. Y. Supp., 801; and the fact that testator is not on friendly terms with his children will not authorize an instruction on insane aversion; Powers Exr. *v.* Powers, 52 S. W. Rep., 845; 21 Ky. Law, 597.

[9] *In re* Redfield's Est., 116 Cal., 637; 48 Pac. R., 794; Peninsular Trust Co. *v.* Barker (Mich.), 74 N. W. Rep., 508.

or its disposition,[1] or is such as is likely to have influenced the testator in making the will in question. A number of illustrative cases are stated in the note.[2]

Though the delusion be an insane delusion and concern the natural object of testator's bounty, it does not incapacitate if it does not appear that the delusion affected the disposition of the property.[3]

In Pennsylvania, the court held, where the allegation was that a testator was incompetent because of an insane delusion, that the

[1] *In re* Richardson's Will, 51 App. Div., 637; 64 N. Y. Supp., 944.

[2] See Banks *v.* Goodfellow, L. R., 5 Q. B., 548; Smith *v.* Smith, 48 N. J. Eq., 566; 25 Atl. Rep., 11; Gilman *v.* Ayer (N. J. Pre.), 47 Atl. R., 1049; Shreiner *v.* Shreiner, 178 Pa. St., 57; 35 Atl. Rep., 974; Englert *v.* Englert, 198 Pa. St., 326; 47 Atl. R., 940; Genl. Conv. of New Jerusalem Ch. *v.* Crocker, 7 O. Co. Ct., 327. *In re* Jones Will (Surr.), 5 Misc. R. (N. Y.), 199; 25 N. Y. Supp., 109, the testator had declared that he had more property than any one knew of, enough to make all his relatives rich, and that he would give a necklace of $20 gold pieces that would go round the neck and reach to the ground; *held*, not to show an insane delusion as to the amount of his property. Nor does the mere fact of a cash legacy in excess of testator's personal property afford, by itself, evidence of an insane delusion as to the amount of that property; Hall *v.* Perry, 87 Me., 569; 33 Atl. Rep., 160; the delusion of a testator, otherwise of good mind and memory, that his family was trying to kill him, was held insufficient to avoid the will; Edwards *v.* Davis (Ohio), 30 Wkly. Law Bull., 283; *cf. re* Lapham's Will, 19 Misc. R. (N. Y.), 71; 44 N. Y. Supp., 90; *cf.* Gannon's Will, 2 Misc. R. (N. Y.), 329; 21 N. Y. Supp., 960. In the last mentioned case the jury found that the deceased had testamentary capacity, but that he also had a delusion as to the fidelity of his wife, which led him to deprive her of any portion of his property; *held*, it was not error to set aside the will.

In Hope *v.* Campbell, App. Cas. (1899), 1 (Eng.), it was alleged that testator was subject to insane delusions respecting his duty to advance total abstinence and oppose the Church of Rome, using his property to these ends, under direct divine command, which dominated his mind and overmastered his judgment so as to render him incapable of making reasonable and proper settlement of his means and estate, or of taking a rational view of the matters to be considered in making a will; held to present a relevant case for trial. Also *cf.* Martin *v.* Thayer, 37 W. Va., 38, where a will was held valid though the testator had a mistaken belief as to the dishonesty of a grandchild; *supra*, p. 394; and *in re* Bedlow's Will, 67 Hun (N. Y.), 408; 22 N. Y. Supp., 290, where mistake of testator as to his family's conduct toward him was held to be no ground for setting aside his will disinheriting them; and *in re* Smith's Will (Surr.), 24 N. Y. Supp., 928, where the testator had a belief which might have been a mistake, that he was not the father of his wife's child; as to insufficiency of evidence to show insane delusion in case where the alleged delusion is not inconsistent with a possibility see *in re* Ziegler's Will, 65 Hun, 621; 19 N. Y. Supp., 947. See also Bain *v.* Cline, 33 Pac. Rep., 542; 24 Or., 175.

[3] *In re* Hemingway's Est., 195 Pa. St., 291; 45 Atl. R., 726; *In re* Kendrick's Estate, 130 Cal., 360; 62 Pac. R., 605 (this is an essential part of an instruction to a jury on the subject). *In re* Iredale's Will, 53 App. Div. (N. Y.), 45; 65 N. Y. Supp., 533.

question was not alone whether the testator's views were unsound, but also whether they so impressed his mind as to control his judgment in the disposition of his property so as to prevent his appreciating the duty to his family.[1]

Where there is an insane delusion directly affecting the disposition provided in the will, the will is invalid, notwithstanding the testator's mind is sound in regard to his dealings in general[2] or in other respects.[3]

It is proper, in a jury trial, for the court to define "insane delusion,"[4] and it is deemed improper to use instead the term "insane prejudice," as "insane delusion" is a term having a recognized legal meaning, while "insane prejudice" has not.[5]

Opinions and Mental Peculiarities as Distinguished from Incapacitating Delusions—Questions of Religious Belief Are Irrelevant.—Belief on a question which is entirely within the domain of opinion or faith, and not of knowledge, such as the opinion as to a future state, cannot in any respect be deemed evidence of insanity. On such a question, there is, in a logical sense, no major premise of knowledge.[6]

[2] *In re* Trich's Will, 165 Pa. St., 586; 30 Atl. Rep., 1053.

[2] *In re* Segur's Will (Vt.), 44 Atl. R., 342; Thomas *v.* Carter, 170 Pa. St., 272; 33 Atl. Rep., 81; *cf.* Gwin *v.* Gwin (Idaho), 48 Pac. R., 295. On the subject of mistaken belief as distinguished from insane delusions see *supra*, p. 394.

[3] Orchardson *v.* Cofield, 171 Ill., 14; 40 L. R. A., 256; 49 N. E. Rep., 197.

[4] Appeal of Kimberly, 68 Conn., 428; 36 Atl. Rep., 847; see 37 L. R. A., 261 n.; cf. Layer *v.* Layer, 22 Ky. L. R., 1936; 62 S. W. R., 15.

[5] *In re* Kendrick's Est., 130 Cal., 360; 62 Pac. R., 605.

[6] N. Y. Surr. Ct., 1872, Bonard's Will, 16 Abb. Pr., N. S., 128; explained in Brown *v.* Ward, 36 Am. R., 422, 426; 53 Md., 377.

An Englishman who had lived many years in India, and had at different times expressed himself a believer in the Hindu and Mohammedan faiths, and who had to a great degree adopted the habits of life of the latter, provided by his will for the erection of a cenotaph at Constantinople, with a light burning, and a description of the testator engraved thereon. This will was sustained as being rational in view of the history and opinions of the testator. Austen *v.* Graham, 8 Moore P. C., 493; 1 Spinks, 357.

In the Bonard will case the testator, it was alleged, believed that the souls of men after death passed into animals, and he having no family nor known relations, devised and bequeathed his property to the Society for the Prevention of Cruelty to Animals. But it did not appear that he made any declaration of his peculiar opinions, in connection with his intended testamentary disposition. *Held* that these opinions were not evidence of insanity or insane delusions, even though the testamentary intention might not, otherwise than for the alleged delusion, have been entertained. Bonard's Will, 16 Abb. Pr., N. S., 128.

In another will contest, it appeared that more than twenty years before making his will, and nearly thirty years before his death, testator was confined to an insane asylum for a few months for religious

Belief in Spiritualism, in Christian Science, or in Witchcraft, unless causatively affecting Subject-Matter of the Will, does not Incapacitate.—The belief in spiritualism is at this time so common that the law must regard its followers, when their testamentary capacity is in question, the same as those who have a different religious belief.[1] But where the will is the offspring of the belief,[2] or rather, of imposition practised on the credulity inspired by the belief,[3] it may be invalidated, on the ground, principally, of undue influence.

Belief in witchcraft,[4] or Christian Science,[5] or in spiritualism does not incapacitate, especially where it has nothing to do with

insanity; that he was a great reader of the Bible and of a religious paper; that before making his will he prayed much at night, and professed to have seen three lights typifying different religious denominations; that in the heat of discussion he talked of religion in an excited manner; that he sometimes had a wild look, and lost much sleep. *Held*, that these facts did not support a verdict of insanity, rendering void the will which devised his property to a religious society, where it further appeared that he amassed a considerable fortune after his release from the asylum; that his relatives, the contestants of the will, often procured him to go on their bond as surety; and that they joined him in business transactions, and allowed him to look after their interests; and where many witnesses, who had known testator intimately for years, testified that he was perfectly rational on all subjects, and that he had perfect health, slept well, and was a fine business man. Williams *v.* Williams (Ky.), 23 S. W., 789. See also following paragraph and cases cited.

[1] Keeler *v.* Keeler, 20 N. Y. State Rep., 439; s. c. as *in re* Keeler's Will, 3 N. Y. Supp., 629, citing Brown *v.* Ward, 53 Md., 377; Robinson *v.* Adams, 62 Me., 369; 16 Am. Rep., 473; Smith's Will, 52 Wis., 544; 38 Am. Rep., 756; 8 N. W. Rep., 616; 9 N. W. Rep., 665; Addington *v.* Wilson, 5 Ind., 137; Vedder's Will, 14 N. Y. State Rep., 470; Foreman's Will, 54 Barb., 274; Bonard's Will, 16 Abb. Pr., N. S., 128. And see note, 36 Am. Rep., 426. *In re* Dunahugh's Will (Iowa), 107 N. W. R., 925. *In re* Halbert's Will, 15 Misc. R., 308; 37 N. Y. Supp., 757; so also of belief in witches in case of a deed, Schueitter *v.* Carman, 98 Iowa, 276; 67 N. W. Rep., 249; Steinkuehler *v.* Wempner (Ind.), 81 N. E. R., 482; Buchanan *v.* Pierce, 54 Atl., 383; 205 Pa. 123. But see *In re* Beach, 23 App. Div. (N. Y.), 411; 48 N. Y. Supp., 437, where it was held that a presumptive case was made out for an inquiry into sanity, when the petition and affidavits showed that on advice which he believed came from spirits of dead persons, he was about to dispose of property to a medium through whom the advice was given.

[2] See *in re* Rohe's Will, 22 Misc. Rep. (N. Y.), 415; 50 N. Y. Supp., 392; *in re* McIlroy's Est., 10 Pa. Dist. R., 78; see also the following cases on the general subject, Thompson *v.* Hawks, 11 Biss., 440; 14 Fed. R., 902; *in re* Storey, 20 Ill. App., 183; Baylies *v.* Spaulding (Mass.), 6 N. E. Rep., 62; 1 New Eng. Rep., 914; Turner *v.* Rusk, 53 Md., 65; Greenwood *v.* Cline, 7 Or., 18; Lyon *v.* Home, L. R. 6 Eq., 655.

[3] Orchardson *v.* Cofield, 171 Ill., 14; 49 N. E. Rep., 197; 40 L. R. A., 256.

Steinkuehler *v.* Wempner (Ind.), 81 N. E. R., 482. And see below, *Undue Influence*, p. 416.

[4] Fielbright *v.* Perry Co., 145 Mo., 432; 46 S. W. Rep., 955.

[5] *In re* Brush's Will, 35 Misc. R. (N. Y.), 689; 72 N. Y. Supp., 421.

the making of the will,[1] and this is so even if the belief in supernatural spiritual manifestations is founded on delusive appearances,[2] or leads to unreasonable dispositions of property.[3]

The mind of John Banks, a testator, had long been disturbed by two delusions, the one that he was pursued by spirits, the other that a certain Featherstone Alexander, a man long since dead, came personally to molest him. Neither of these delusions—the dead man not having been in any way connected with him—had or could have any influence upon him in making the will in question. *Held* that the existence of a delusion, compatible with the retention of the general powers and faculties of the mind, is not sufficient to overthrow the will, unless it is such as is calculated to influence the testator in making it.[4]

The following case may also be regarded as typical:

Eliza Ann Vedder died January 19th, 1887, at the age of seventy-seven years, leaving a will by which nearly all the property of the decedent was devised and bequeathed to her husband, the proponent. The nephews and nieces of decedent opposed the probate on the ground, among others, that she was not of sound mind, memory, and understanding. There was no issue of the marriage. The will in question was executed in August, 1883, at the house of decedent and proponent. At the same place, Mr. Vedder, the proponent, made and executed a will whereby he gave all his property to his wife, the testatrix. Among the principal facts proved by the contestants were the following: That the testatrix was in gradually failing physical condition; that she believed in witches and witchcraft; that she told a neighbor that she had seen a headless horseman riding across her field; that she said she could not keep her horses fat because the witches rode them at night; that she put irons in the cream and marked the bottom of the churn with the sign of the cross, to make the butter come, etc., etc. On the other hand, the proponent proved that, in the performance of her household

[1] *Re* Spencer's Estate, 96 Cal., 448; 31 Pac., 453; and see Otto *v.* Doty, 61 Iowa, 23; 15 N. W. R., 578; Robinson *v.* Adams, 62 Me., 369; 16 Am. Rep., 473; McClary *v.* Stull, 44 Neb., 175; 62 N. W. R., 501; Middleditch *v.* Williams, 45 N. J. Eq., 726; 17 At., 826; 4 L. R. A., 783.

[2] N. Y. Supm. Ct., 1871, Fowler *v.* Ramsdell, 4 Alb. L. J., 94.

[3] Whipple *v.* Eddy, 161 Ill., 114; 43 N. E. Rep., 789.

[4] Banks *v.* Goodfellow (1870), L. R., 5 Q. B., 548.

duties and farm business, the testatrix was a prudent, sensible woman. The subscribing witnesses were clear in their belief that the testatrix was of sound mind and memory when she executed the will.

Woods, surrogate, expressed the following opinion: "There is no evidence whatever to show that any or all of these beliefs, delusions, eccentricities, or peculiarities had the slightest connection with, or influence upon, her testamentary act here in question. Scarcely two centuries ago the great body of Christians believed in witchcraft. Profound theologians contended that a disbelief in it was rank heresy, and they cited Scripture to their purpose. The Bible was the book of books to the testatrix. It is not strange that the ancient belief in witchcraft survived in her. Her belief did not disqualify her from disposing of her property by will, and I hold that she was '*compos mentis.*'"[1]

PHYSICAL PAIN; DISEASE.

Great pain does not of itself destroy testamentary capacity,[2] nor does disease which might affect the brain, but is not shown to have affected it.[3]

Partial Loss of Memory, or Impairment of Faculties, or Existence of Nervous Disease, Does not of Itself Incapacitate—Highest Degree of Mental Soundness not Required.—"The highest degree of mental soundness is not required in order to constitute capacity to make a testamentary disposition. A person's mind may be impaired by grief, disease, melancholy, or old age, yet if he has sufficient

[1] Matter of Vedder, 6 Dem., 92. See Stewart Chaplin, "Principles of the Law of Wills," New York, 1892.

[2] Stevens *v.* Leonard, 154 Ind., 67; 56 N. E. R., 27.

[3] *In re* Gihon's Will, 44 App. Div. (N. Y.), 621; 60 N. Y. Supp., 65. In Ohio, it has been said that a will must be made while the testator is absolutely free from the pains of death, and that the law will make a will, rather than that a will made under such circumstances shall stand. But it is apprehended that the true rule is, rather, that a person in such a condition as the testator in that case was at the time mentally incompetent by the rules already stated, than that pains, even though they result in death, or be incident to approaching death, should invalidate a will; in short, that the situation and condition of testator are evidence from which his mental state can be determined in a given case, rather than that where pain of very serious portent exists, the existence of the pain precludes testamentary competency. The decision of this case appears to be correct, but the language of the Court is somewhat unguarded. *In re* Burrow's Est., 11 Ohio S. & C. P. Dec., 229; 8 Ohio N. P., 358; *cf. in re* Nelson's Est., 132 Cal., 182; 64 Pac. R., 294.

ability to weigh and consider intelligently the act of making the will, and its surrounding circumstances, the will will be valid."[1]

Defect of memory, unless it is total or appertains to things very essential, is not sufficient to create incompetency;[2] nor is old age, however extreme.[3] Impairment of faculties by age or injury, to a considerable degree, does not necessarily affect testamentary capacity.[4]

In testimony given as to the eccentric mental condition of a school teacher, who was in the habit of making wills in favor of schoolgirls, it was shown that he was subject to changes in political opinion, was childish in his tastes, and of defective memory, but that he could make clever addresses, and success-

[1] "The Am. and Eng. Encycl. of Law," vol. xi., p. 153 (1st ed.). See also *in re* Gatley's Est., 16 Pa. Co. Ct. Rep., 69; 4 Pa. Dist., R., 52; Pritchard *v.* Henderson, 3 Penne. (Del.), 128; 50 Atl. R., 217; Perkins *v.* Perkins (Iowa), 90 N. W. R., 55. *In re* Rapplee's Will, 66 Hun, 558; 21 N. Y. Supp., 801, the testator was held to have sufficient testamentary capacity, though he had suffered from an epileptic fit, to which he was subject, two weeks prior to the execution of his will, and his fits usually kept him weak in body and mind for two or three days, after which he resumed his usual avocation. In Howell *v.* Taylor (N. J. Prerog.), 26 Atl. Rep., 566, the testator was almost imbecile, but his will was just and rational, and he told one of the witnesses that he knew its contents; held valid, though one of the legatees gave instructions to the draughtsman and two other legatees were present at its execution. *In re* Flansburgh's Will, 82 Hun, 49; 31 N. Y. Supp., 177, testator was held competent, though he was irritable, excitable, subject to epileptic fits, not cleanly, partially blind, acted childishly, shed tears, and sometimes got lost. In Cutler *v.* Cutler, 79 N. W. Rep., 240; 103 Wis., 258, it was held that bad spells, fainting fits, foolish remarks, and memory not active as formerly do not establish incapacity. In Hutchinson *v.* Hutchinson, 157 Ill., 347; 38 N. E. Rep., 926, testator's health was impaired, and he was peculiar, eccentric, dissipated, and melancholy; yet he was competent. See also *in re* Buchan's Will, 16 Misc. R. (N. Y.), 204; 38 N. Y. Supp., 1124 (impairment of faculties, followed by death from Bright's disease, following day).

[2] *In re* Mabie's Will (Surr.), 5 Misc. R. (N. Y.), 179; 24 N. Y. Supp., 855, where the competent testatrix was impaired in memory, eccentric in conduct and conversation, and was not able to conduct her household duties without assistance; Whiteman *v.* Whiteman, 152 Ind., 263; 53 N. E. Rep., 225.

[3] N. Y. Surr. Ct., 1851, Bleecker *v.* Lynch, 1 Bradf., 458; see *infra*, p. 410.

[4] Reynolds *v.* Root, 62 Barb., 250. In Wood *v.* Lane, 29 S. E. Rep., 180; 102 Ga., 199, the court granted a second new trial, though the jury had twice found against the validity of the will, where the only evidence of incapacity was that testator had been long bedridden, had a poor recollection, repeated the same stories frequently, and had difficulty in understanding his accounts.

Where a testatrix died of inanition at the age of 68, but kept her will before her for several days for reflection, and knew its contents and the value of her property, her debilitated condition was held not to deprive her, as matter of law, of the will power essential to make a valid will. *In re* Adams, 10 Pa. Dist. R., 237.

fully managed his large property. *Held* not sufficient to justify setting aside a will disinheriting his next of kin.[1]

Mental incapacity to make a will is not shown by the facts that testator was hysterically deranged[2] or fidgety and excited, and suffered from paroxysms and that these were aggravated by despondency over the loss of money.[3] Feeble and weak-minded people are not necessarily precluded from making valid wills.[4]

Nor does "moral insanity" incapacitate,[5] nor imbecility or weakness of mind, if there be sufficient understanding to comprehend the condition of his property and testator's relations toward the persons who are or might be the objects of his bounty, and the scope and bearing of the provisions of his will.[6] But where a person was in a dying condition from consumption and had not sufficient mental capacity to discriminate clearly between the objects of her affection, she was deemed incompetent.[7] Where testator was very ill, incapable of transacting business on account of the frequent administration of morphine, and experts were of opinion that he was not in condition to

[1] Matter of Merriam, 42 N. Y. State Rep., 619; 16 N. Y. Supp., 738, citing Horn *v.* Pullman, 72 N. Y., 270; Delafield *v.* Parish, 25 *id.*, 9.

[2] Beresford *v.* Stanley, 6 Ohio N. P., 38.

[3] *In re* Speller's Estate (Pa. Co. Ct.), 2 Pa. Dist. R., 513. But evidence that testatrix was erratic, eccentric, rambling, disconnected in conversation, flighty in her notions, unsettled, excited in manner, could not comprehend connected conversation, ran about the house screaming, though not, perhaps, sufficient itself to show testamentary incapacity is competent to be considered with other evidence. Prentis *v.* Bates, 93 Mich., 234; 53 N. W. Rep., 153.

[4] Matter of Williams, 40 N. Y. State Rep., 356; 2 Connolly, 579; 15 N. Y. Supp., 828; aff'd 46 State Rep., 791; 19 N. Y. Supp., 778; citing *re* Gray, 5 N. Y. Supp., 464; *re* Gross, 14 State Rep., 429. *In re* Iredale's Will, 53 App. Div. (N. Y.), 45; 65 N. Y. Supp., 533; Pritchard *v.* Henderson, 3 Penne. (Del.), 128; 50 Atl. R., 217. A verdict of incapacity was set aside where the evidence merely showed that testatrix was forgetful, had temporary lapses of understanding, made incoherent and irrelevant remarks, was given to repetition, but also that she discussed matters intelligently, understood what she was talking about and her relations to her property, and her children, and had an intelligent perception of how she desired to dispose of her property. Holmberg *v.* Phillips (Iowa), 78 N. W. Rep., 66.

[5] *In re* Jones's Will (Surr.), 5 Misc. R. (N. Y.), 199; 25 N. Y. Supp., 109. Gorkow's Est., 20 Wash., 563; 56 Pac. R., 385, testator man of violent passions, dissipated, physical wreck, associating with vile associates, not incompetent.

[6] Wade *v.* Holbrook, 2 Redf., (N. Y.), 378. Lack of cleanliness and mere mental peculiarities are not sufficient to raise an issue. *In re* Knight's Est., 167 Pa. St., 453; 31 Atl. Rep., 682; and where the evidence shows imbecility only it is not error to refuse an instruction on insanity, Mitchell *v.* Copenning (N. C.), 32 S. E. Rep., 798.

[7] Schieffelin *v.* Schieffelin (Ala.), 28 So. Rep., 687; see *infra*, p. 406.

transact business, the finding of testamentary capacity was sustained where he had given the draughtsman instructions, had caused the will to express his intentions, had directed as to the residue and as to executor.[1]

Actual Disease of the Brain Does Not Necessarily Incapacitate.—A will giving all testator's real and personal property to his wife, who had been dutiful and faithful, to the exclusion of his only heirs-at-law, his sister and brother, the latter of whom had been in the habit of vilifying the wife, was sustained where the testator was competent to transact business up to a very short time before his death. The will was made eight months prior thereto, and the question of incompetency was not raised until after the autopsy on his body, which showed tumors on his brain, which it did not appear affected testator's mind.[2]

In a case where softening of testator's brain had gone on for several years before the making of the will, but had not yet brought him to the state of idiocy, although his disease caused serious nervous disturbances and at intervals he suffered from nervous prostration, continuing two or three days, and in common conversation he would frequently lose the train of ideas, but between the attacks his mind was reasonably clear—*held* that testator had sufficient capacity to make a will.[3]

Testator was confined to an insane asylum in 1886 as being afflicted with general paresis. In 1887 he was taken out, and in 1888 married to the proponent. It was not objected that he was incompetent to marry, and the will was executed shortly after. In 1889 he was again confined to the asylum, where he died in 1890. During the time he was not confined to the asylum he transacted business. The testimony of experts was conflicting. *Held* that the testator was competent to make a will.[4]

[1] Slingloff *v.* Bruner, 174 Ill., 561; 51 N. E. Rep., 772; *cf. in re* Wilde's Will, 38 Mise. R. (N. Y.), 149; 77 N. Y. Supp., 164.

[2] Matter of Friek, 47 N. Y. State Rep., 10; 19 N. Y. Supp., 315, citing Cudney *v.* Cudney, 68 N. Y., 148; Brick *v.* Briek, 66 *id.*, 149; Matter of Smith, 95 *id.*, 516; Matter of Martin, 98 *id.*, 193; Clapp *v.* Fullerton, 34 *id.*, 190; Horn *v.* Pullman, 72 *id.*, 269.

[3] *In re* Silverthorn, 68 Wis., 372; 32 N. W. Rep., 287. *In re* Lening's Est., 4 Pa. Dist. Ct. R., 94; 36 W. N. C., 118, testatrix was eighty years old, had acted strangely and was confused as to loeation of her room, and experts testified that she had begun two years previously to pass into a state of senile dementia which greatly increased six months after the execution of the will—issue of mental ineapacity was denied; see also Hill *v.* Fly (Tenn.), 52 S. W. Rep., 731.

[4] Will of Kiedaiseh, 13 N. Y. Supp., 255; see also somewhat sim-

Testator for some years before making his will had had syphilis and had become a physical wreck, losing his hair, teeth, eyesight partially, and the use of his lower limbs. To relieve his pain he used a large quantity of morphine, and while suffering was extremely profane. He was able, however, to conduct business transactions, dictated the will himself, and left his property to a sister who took care of him. *Held* that the evidence did not show want of testamentary capacity or undue influence.[1]

Paralysis, and Aphasia or Other Brain Diseases, Do not Necessarily, but May, Incapacitate.—The will of a paralytic was sustained where, though unable to talk at the time of its execution, he was unimpaired in mind, and the scrivener ascertained his wishes by asking him questions as to the provisions for his wife and children which could be answered by yes or no, and he signified his assent to each item of the will by an affirmative nod of the head as it was read to him, and he was asked if it suited him.[2]

It is thus seen that although a well-defined mental disease such as general paralysis is present, or the existence of cerebral hemorrhage is shown by paralysis and loss of speech, these conditions are insufficient to invalidate a will, provided it can be proved that the testator possessed a disposing mind, memory, and understanding.[3]

Where testatrix made her will during an illness, when in apparently sound mental condition, the fact that on recovery she could not remember anything which occurred during her illness, did not prove want of capacity.[4]

ilar case of Barbey *v.* Boardman, 202 Pa. St., 185; 51 Atl. R., 756.

[1] Bush *v.* Lisle, 89 Ky., 393; 12 S. W. Rep., 762. *Use of Opiates:* In Miller *v.* Oestrich, 157 Pa. St., 264; 27 Atl. Rep., 742, the testatrix being an invalid, was in the habit of taking morphia in reasonable quantities to relieve pain, and when awakening from the sleep caused thereby was occasionally confused; she was held competent. *In re* Hamilton's Est., 4 Pa. Dist. R., 161; 16 Pa. Co. Ct. R., 303, in the beginning of an illness testator was kept under influence of narcotics, and subsequently made his will, while in enjoyment of his faculties, but during same illness; *held* competent.

[2] Rothrock *v.* Rothrock, 22 Or., 551; 30 Pac., 453.

[3] See Cheney *v.* Price, 90 Hun, 238; 37 N. Y. Supp., 117, where testator was held competent although he had suffered a stroke of apoplexy resulting in partial paralysis; *In re* Cruger's Will, 36 Misc. R., 477; 73 N. Y. Supp., 812, where the will was holographic and testator was paralyzed of speech and otherwise physically weak.

[4] Henry *v.* Hall, 106 Ala., 84; 17 So. Rep., 187.

However, where a testator was suffering with aphasia and could mumble only "yes," "no," and "ah," and the will was elicited from him by asking questions to which he only nodded, his codicil, executed under such conditions, and in the presence of two persons who had a controlling influence over him, was set aside.[1]

Extreme Weakness of Mind or Body, or Approaching Death, Does not Incapacitate where Evidence Shows that Testator Was Rational.—A testator is not to be regarded as incapable of executing his will, because at the time of its execution he was approaching his end, and was so physically weak that he was unable to make his mark without assistance, where there is evidence to show that he was entirely rational.[2]

Where testatrix could understand and dispose of ordinary business matters and remember the particulars of a transaction and give a rational judgment upon it, although she was forgetful about household affairs and failed to recognize acquaintances, it was held that she had sufficient testamentary capacity.[3]

In the following case the will was sustained notwithstanding an extreme degree of physical and mental weakness: For some months before executing the codicil testator began to drink, after having abstained for ten years. On several occasions he was a voluntary inmate of an inebriate asylum, but did not overcome the habit. For some time before making the codicil he was con-

[1] Smith *v.* Henline, 174 Ill., 184; 51 N. E. Rep., 227; see also *infra*, p. 418.

[2] Supm. Ct., Matter of Patterson, 26 Abb. N. C., 395; 36 State Rep., 813; 13 N. Y. Supp., 463. See also *in re* Seagrist's Will (Surr.), 11 Misc. R. (N. Y.), 188; 32 N. Y. Supp., 1095; *In re* Dixon's Will, 42 App. Div. (N. Y.), 481; 59 N. Y. Supp., 421; Skinner *v.* Lewis (Or.), 67 Pac. R., 951; *In re* Cruger's Will, 36 Misc. R., 477; 73 N. Y. Supp., 812. In Sehr *v.* Lindemann, 153 Mo., 276; 54 S. W. Rep., 537, the testator was too blind to see to write, was partially deaf, was sick with intermittent fever, and was thought to be dying, but it appeared that he knew he was making a will, what property he had, its value, the names and ages of those dependent on him and related to him, and the disposition he was making, though he discriminated against his children by a first wife, in favor of a second wife and her children; *held*, that the question of incompetency should not be submitted to jury.

[3] Matter of Mabie, 5 Misc., 179; 24 N. Y. Supp., 855, citing Horn *v.* Pullman, 72 N. Y., 269; Van Guysling *v.* Van Kuren, 35 *id.*, 70; Cornwell *v.* Riker, 2 Dem., 354; Matter of Williams, 19 N. Y. Supp., 778; Matter of Snelling, 136 N. Y., 515; Matter of Stewart, 15 N. Y. Supp., 601; Matter of Fricke, 19 *id.*, 315; *in re* Gray, 5 *id.*, 464; *in re* Bartholick, *id.*, 842; *in re* Darling, 6 *id.*, 191; *in re* Bennett, *id.*, 199; *in re* Berrien, 5 *id.*, 37; 12 *id.*, 385; Matter of Merriam, 16 *id.*, 738.

fined to his room by an illness resulting from the use of liquor. The attending physician was unable to say whether he was drunk or sober when he executed the codicil, but testified that he was so incoherent as to be unable to alter a will, and was troubled with delusions, thinking he saw figures and heard voices. The nurse, attorney, and others testified as to his capacity. *Held* that an issue to a jury as to the validity of the will was properly denied.[1]

In another case a verdict that testatrix was of unsound mind when she made a will disinheriting an only child who was in straitened circumstances, was set aside when the evidence showed that after her husband's death she lived for the greater part of her life by herself, occasionally staying with friends; that at various times she named as heir different persons, strangers and relatives, including her son, that a few hours before her death, and while in a very exhausted condition, she made her will in favor of her nephew, whose father had persistently and for a long time pressed her to do so.[2]

In New York a will has been admitted to probate though the testatrix became unconscious after signing the will and died next day, and was so weak as to be unable to assent to the will when read to her, or to request the witnesses to sign it except to nod assent when asked if she wished them to sign, but her will was in accordance with a previously drawn memorandum of her intention.[3]

[1] Appeal of Harmony Lodge, etc., 127 Pa. St., 269; 18 Atlantic Rep., 10. See also *in re* Rowson's Est., 4 Pa. Dist. Ct. Rep., 91, where an issue was denied, though testator had two strokes of apoplexy within one week before making his will, and died three days afterward, but witnesses testified that at the time of the execution testator understood what was said to him, answered questions, and was angry at being considered mentally weak. See *in re* Miller's Est., 179 Pa. St., 645; 36 Atl. Rep., 139; 39 W. N. C., 397, where evidence of great discrimination in favor of one child against five others, and that testator drank to gross excess for ten years and was afflicted with locomotor ataxia, did not make a case to go to the jury. In Dieffenbach *v.* Grece (N. J. Pre.), 39 Atl. Rep., 536; 56 N. J. Eq., 365, testatrix was seventy-two years old, unable to retain nourishment, and slowly dying of starvation, and was under the influence of morphine, but could be aroused to intelligence; she had made different provision by a former will made a month before, but explained that she did not understand that one because in English, which she scarcely understood; the later will was in German, her native tongue; *held* that she had capacity.

[2] Garley *v.* Park (Ind. Sup.), 35 N. E., 279. See additional illustrations in *re* Wilson's Est., 117 Cal. R., 262; 49 Pac. Rep., 172; *In re* Harris's Will (Surr. N. Y.), 19 Misc. R., 388; 44 N. Y. Supp., 341.

[3] *In re* Wilde's Will, 38 Misc. R., 149; 77 N. Y. Supp., 164.

Extreme Physical and Mental Weakness May Incapacitate, if Testator Is not Rational—Illustrative Cases.—Testatrix was very sick and so weak that she was unable to make her mark without assistance. Her physician, who saw her shortly after she made the will, stated that she did not recognize him; that she spoke to no one unless aroused and showed no interest in anything around her. Other witnesses testified that she was in a dazed and stupefied condition, and that during the day her mind wandered. She died four days after the will was executed. *Held* that the deceased did not have testamentary competency.[1]

There was evidence that the testator was bedridden, subsisting mostly on morphine and whiskey. That the day before making the will disinheriting a daughter if she should marry a certain person, as well as on the day of making the will, he had taken sufficient morphine to make him drowsy. There was also evidence in support of testator's capacity. *Held* that a finding against the will would not be distur[illegible]ed.[2]

A decision by the surrogate that the testator was *non compos mentis*, based on evidence that he was eighty-two years old, ill of incurable disease of which his physician informed him he could never recover, was helpless, of feeble mind, and unable to carry on conversation at the time he executed the will—sustained.[3]

A decree admitting to probate a will made by a paralytic who was unable to write or speak, where a draughtsman who attempted to draw a previous will had failed to understand testator's wishes—reversed and a trial by jury ordered.[4]

In a case where testatrix was paralyzed, though she afterward regained the use of some of her limbs, but was bedridden and speechless, except that she could say "Yes," "No," and "Well." Some of her neighbors testified that they believed her competent to make a will. Her physician testified, "I am satisfied that

[1] *In re* Coop's Will, 6 N. Y. Supp., 664; see also Johnson *v.* Coehrane, 91 Hun, 165; 36 N. Y. Supp., 283; *In re* Barbineau's Will, 27 Misc. R., 417; 59 N. Y. Supp., 375; *cf. in re* McGraw's Will, 9 App. Div., 372, 41 N. Y. Supp., 481.

[2] Carlin *v.* Baird (Ky.), 13 S. W. Rep., 434.

[3] Matter of McCarthy, 48 State Rep., 315; 20 N. Y. Supp., 581; 65 Hun, 624.

[4] Matter of Raynor, 44 State Rep., 468; 18 N. Y. Supp., 426; distinguishing Rollwagen *v.* Rollwagen, 3 Hun, 132; 63 N. Y., 518.

she understood in a measure what was said to her in regard to the will," and "I think she had an idea of the drift of it—a vague idea." The draughtsman, by a series of speculative questions suggested by her children, succeeded in producing the will. All her property was left to her children, except a small sum, with which she cut off an absent grandchild, a daughter of a deceased son. *Held* that testatrix was not competent to make a will.[1]

Where testator at the time he executed the will was in an intermittent stage of mental disorder, and afterward died in an insane asylum—*held* that a verdict finding him incapacitated to make a will should not be disturbed.[2]

Weakness of mind may incapacitate without actual mental disease, if it deprives the testator of the degree of intelligence which has been stated above as the measure of competency.[3]

Delirium of Fever May also Incapacitate, if Testator Is not Rational—Illustrative Cases.—Testator had a high fever the day he executed the will and was delirious, sometimes getting out of bed, and refusing cider he had asked for, on the ground that it was something else. One witness testified that before the will was drawn he seemed bewildered, and did not know what was said to him, and talked incoherently to himself. *Held*, that the jury's finding against the will would not be disturbed.[4]

[1] Mendenhall *v.* Tungate, 95 Ky., 208; 24 S. W., 431; see also Hudson *v.* Hughan, 56 Kan., 152; 42 Pac., 701.

[2] Matter of Loewenstein, 2 Misc., 323; 51 State Rep., 423; 21 N. Y. Supp., 931. *Additional illustrations of want of mental capacity:* testatrix nervous, feared insanity, twice attempted to commit suicide, had been in asylum, wavered as to disposition of property, was confined to her bed with creeping palsy, was entirely helpless, had epileptic fits; five physicians testified she was mentally unsound, will was drawn five days before her death, when she was too feeble to sign till following day and seemed to have no clear idea of its contents. *In re* Round's Will, 25 Misc. R. (N. Y.), 101; 54 N. Y. Supp., 710. Testator twice paralyzed, deteriorated mentally and physically, became violently insane four or five days after making will, died within two weeks. Johnson *v.* Cochrane, 159 N. Y., 555; 54 N. E. Rep. aff'g 91 Hun, 168; 36 N. Y. Supp., 283.

[3] Manatt *v.* Scott, 106 Iowa, 203; 76 N. W. Rep., 717.

[4] Keithley *v.* Stafford, 126 Ill., 507; 18 N. E. Rep., 740. But see Green *v.* Green, 145 Ill., 264; 33 N. E., 941.

Deafness or Deaf-Mutism not Causing Idiocy Does not Incapacitate.

No presumption of testamentary incapacity arises from deafness.[1] A deaf and dumb person is not necessarily an idiot.[2]

A deaf and dumb person may make a will if all the statutory requirements are carried out in their spirit and intent in such manner as is practicable under the conditions existing.[3]

No Presumption of Testamentary Incapacity Arises from Old Age and Feebleness[4]—Illustrative Cases.

The following cases illustrate the tendency of the courts to find capacity even where the testator's mind has been affected by age and other unfavorable conditions:[5]

Where testator, eighty-four years old, without direct de-

[1] Matter of Williams, 40 N. Y. State Rep., 356; 2 Connolly, 579; 15 N. Y. Supp., 828; aff'd 46 State Rep., 791; 19 N. Y. Supp., 778; citing Gombault *v.* Public Administrator, 4 Bradf., 226.

[2] Brower *v.* Fisher, 4 Johns. N. Y. Ch., 441.

[3] Matter of Perego, 65 Hun, 478; 48 State Rep., 496; 20 N. Y. Supp., 394, citing Matter of Beeket, 103 N. Y., 167; Matter of Stillman, 29 State Rep., 213.

[4] *In re* Iredale's Will, 53 App. Div. (N. Y.), 45; 65 N. Y. Supp., 533; Riggin *v.* Bd. of Trustees, Westminster College, 160 Mo., 570; 61 S. W. R., 803; see *infra*, p. 549, "Presumptions."

[5] Old age, feeble health, blindness, and a mind not so strong as formerly, O'Connor *v.* Madison, 98 Mich., 183; 57 N. W. Rep., 105. Irritability, excitability, epileptic fits, unclean habits, partial blindness, occasional childishness, and shedding of tears, and getting lost. *In re* Flansburgh's Will, 82 Hun, 49; 31 N. Y. Supp., 177. Impaired health, peculiarities, eccentricity, dissipation, and melancholy. Hutchinson *v.* Hutchinson, 152 Ill., 347; 38 N. E. Rep., 926. Cancer and old age. *In re* Metcalf's Will, 16 Misc. Rep. (N. Y.), 180; 38 N. Y. Supp., 1131. Testatrix a childless widow, eighty years of age, devised her property to her husband's relatives to the exclusion of her own, but she had derived her estate from him, and had a fixed purpose so to dispose it; she was on friendly terms with her own relatives, but they were not notified of her last illness; a strange lawyer wrote her will, a strange physician attended her; a mistake was made in the name of a beneficiary; she was delirious at times, and enfeebled; *held* insufficient to submit to the jury, because at most the facts created only a suspicion of incapacity. Davis *v.* Cox (Ky.), 67 S. W. R., 261. Old, feeble, not competent to do business, mind not what it once was. Von de Veld *v.* Judy (Mo.), 44 S. W. Rep., 1117; 143 Mo., 348. Testator, 91 years old, with cataract, bad memory. Stevenson *v.* Kingsley, 8 Pa. Dist. R., 245. Testatrix at seventy married her fourth husband, half her age, while suffering from disease which shortly caused death. O'Dwyer's Will, 61 N. Y. Supp., 903. See also *infra*, p. 419. See following cases where the facts were sufficient to take the question to the jury: Hegney *v.* Head, 29 S. W. Rep., 587; 126 Mo., 619; Bever *v.* Spangler (Iowa), 61 N. W. Rep., 1072; *In re* Rowson's Est., 4 Pa. Dist. Rep., 91.

scendants, left his entire estate to his second wife a year after he married her in 1887, the will was contested by his nephew for lack of testamentary capacity, and the evidence showed that testator was addicted to the use of intoxicating liquors, but was sober when he executed the will, and was of good business ability; *held*, that the will should be admitted to probate.[1]

The will of a man who died at the age of eighty-six, six months after he had executed it, when he was in feeble health, contested on the ground of incapacity; *held*, on the evidence entitled to probate.[2]

That testatrix was ninety-eight years of age at the time she made her will is insufficient to sustain an appeal against the admission of the will to probate.[3]

That a testator was seventy years of age and of filthy and profane habits and many eccentricities, accounted for by his inclinations and education, was held insufficient to show want of testamentary capacity.[4] Testamentary incapacity was not shown by the facts that testatrix was eighty-four years old, that her will was in favor of persons with whom she boarded, that she excluded nephews and nieces, that she had previously made several such wills in favor of persons with whom she temporarily boarded, and that she was somewhat feeble in body and mind.[5]

[1] Matter of Jones, 5 Misc. (N. Y.), 199, citing Delafield *v.* Parish, 25 N. Y., 9; Van Guysling *v.* Van Kuren, 35 *id.*, 70; Horn *v.* Pullman, 72 *id.*, 269; Matter of Tracy, 11 State Rep., 103; *In re* Stewart, 59 Hun, 618; Peck *v.* Cary, 27 N. Y., 9; Matter of Schreiber, 22 State Rep., 892; Matter of Watson, 39 *id.*, 42.

[2] Matter of Wheeler, 5 Misc., 279, citing Horn *v.* Pullman, 72 N. Y., 269; Van Guysling *v.* Van Kuren, 35 *id.*, 70; Bleecker *v.* Lynch, 1 Bradf., 458; Van Alst *v.* Hunter, 5 Johns Ch., 148; Delafield *v.* Parish, 25 N. Y., 10; Tunison *v.* Tunison, 4 Bradf., 138; Cornwell *v.* Riker, 2 Dem., 354.

[3] Collins *v.* Townley and Johnson, 21 N. J. Eq., 353 (N. J. Prerog. Ct.).

[4] Bennett *v.* Hibbert, 88 Iowa, 154; 55 N. W. Rep., 93; see *in re* Knight's Est., 167 Pa. St., 453; 31 Atl. Rep., 682; *In re* Lening's Est., 4 Pa. Dist. Rep., 94; 36 W. N. C., 118; *In re* Loesen's Est., 16 Pa. Co. Ct. Rep., 49; *In re* Loeser's Est., 3 Pa. Dist. R., 817; 167 Pa. St., 498; 31 Atl. Rep., 732; 35 W. N. C., 543.

[5] *In re* Snelling's Will, 136 N. Y., 515; 32 N. E. Rep., 1006. The cases, of course, all differ in their individual facts. Additional illustrations are afforded by Bain *v.* Cline, 33 Pac. Rep., 542; 24 Oregon, 175; Pooler *v.* Christman, 34 N. E. Rep., 57; 145 Ill., 405; *In re* Carver's Will (Surr. N. Y.), 3 Misc. Rep., 567; 23 N. Y. Supp., 753; *In re* Henry's Will (N. Y. Surr.), 18 Misc. Rep., 149; 41 N. Y. Supp., 1096; Shreiner *v.* Shreiner, 178 Pa. St., 57; 35 Atl. Rep., 974; *In re* Bowers, 27 Pittsb. Leg. J. (N. S.), 237; Riley *v.* Sherwood, 144 Mo., 354; 45 S. W. Rep., 1077; *In re* Murphy's Will, 41 App. Div. (N. Y.), 153; 58 N. Y. Supp., 450; *In re* Dixon's Will, 42 App. Div. (N. Y.), 481; 59 N. Y. Supp., 421; *In re* Carter's Will (N. J. Pre.), 51 Atl. R., 65; Perkins *v.* Perkins (Iowa), 90 N. W. R., 55; *In re* Reed's Est. (Minn.), 90 N. W. R.,

There is no presumption against a will because it was made by a person of advanced age, and incapacity to make a will cannot be inferred merely from an enfeebled condition of mind or body.[1] But where the evidence shows that the aged testator was actually incompetent by reason of age, it is proper to refuse probate.[2]

Habits of Inebriety or the Use of Drugs May Destroy Mental Soundness and Disposing Capacity.

Mere habits of insobriety on the part of the testator are alone not sufficient to invalidate a will, though to be considered as affecting mental capacity.[3]

To defeat a will on the ground of drunkenness of the testator, his condition at the time of making it and not before and after must be shown.[4]

Where the testimony showed that testator was rendered incapable of performing intelligently the ordinary pursuits of life at the time of executing his will, by the use of drugs, the refusal to admit it to probate was sustained.[5]

For long-continued habits of intemperance may gradually

319; *In re* Case (Conn.), 52 Atl. R., 403.

[1] Snyder *v.* Sherman, 23 Hun, 139; Matter of Hurlbut, 26 Misc., 461; 57 N. Y. Supp., 648; Dobie *v.* Armstrong, 160 N. Y., 584; Matter of Dixon, 42 App. Div., 481; 59 N. Y. Supp., 421; *In re* Otis's Will, 1 Misc. R. (N. Y. Surr.), 258; 22 N. Y. Supp., 1060; *In re* Wheeler's Will (Surr.), 5 Misc. R., 279; 25 N. Y. Supp., 313; *In re* Loeser's Est., 3 Pa. Dist. Ct. R., 817; 167 Pa. St. Rep., 498; 31 Atl. Rep., 732; 35 W. N. C., 543; Entwistle *v.* Meikle, 180 Ill., 9; 54 N. E. Rep., 217; see also McFadin *v.* Catron, 120 Mo., 252; 25 S. W. Rep., 506, where the competent testatrix was eighty-three years old and a great sufferer from cancer; *In re* Skaats's Will, 74 Hun (N. Y.), 462; 26 N. Y. Supp., 494, where the competent testator was sixty-five years old, suffering from disease, had ceased to give attention to the details of business, and acted in an eccentric manner; *In re* Douglass's Est., 162 Pa. St., 567; 29 Atl. Rep., 715, where an issue of mental capacity was refused, though it was shown that testatrix was in bad health, suffering from dyspepsia, catarrh, headache, insomnia, and occasional lapses of memory; *In re* Jones's Will (Surr.), 5 Misc. Rep. (N. Y.), 199; 25 N. Y. Supp., 109, where the testator was old, licentious, indecent in conversation, and boasted of amorous exploits.

[2] *In re* Widmayer's Will, 34 Misc. R., 439; 69 N. Y. Supp., 1014; see also Davis *v.* Denny, 94 Md., 390; 50 Atl. R., 1037.

[3] Matter of Peck, 42 State Rep., 898; 17 N. Y. Supp., 248, citing Peck *v.* Cary, 27 N. Y., 9; *In re* Hewitt's Will, 31 Misc. R. (N. Y.), 81; 64 N. Y. Supp., 571; Fluck *v.* Rea, 51 N. J. Eq., 233; 27 Atl. Rep., 636; *In re* Schiesler's Est., 198 Pa. St., 81; 47 Atl. Rep., 966.

[4] *In re* Dimond's Est. (Pa. Orph. Ct.), 3 Pa. Dist. Rep., 554; Hennessy's Heirs *v.* Woulfe, 49 La. Ann., 1376; 22 So. Rep., 394.

[5] *In re* D'Avignon's Will, 12 Colo. App., 489; 55 Pac. Rep., 936.

impair the mind and destroy the faculties, so as to produce insanity which may be of a permanent form. Where such insanity so ensues the incompetency is as complete as if the same condition resulted from any other cause.[1]

But Intoxication not Resulting in Mental Unsoundness Does not Incapacitate.

A will made by one who is at the time under the influence of intoxicating liquor is not for that reason void. To avoid such a will it must be proved that the testator was so excited by liquor, or that he so conducted himself during the particular act, as to be, at the moment, legally disqualified from giving effect to it.[2]

The point of time for investigation is the time when the will was made; if then sober, the testator was not incompetent because of drunkenness at another time,[3] even though the will was made during a lucid interval in an attack of delirium tremens.[4]

The mere fact that a man is an habitual drunkard, and "*non compos*" in his drunken fits, is not enough to invalidate any particular act—*e.g.*, the execution by him of a will.[5] But otherwise where the alcoholism results in insanity.[6]

An habitual drunkard, even after an adjudication of habitual drunkenness,[7] or even though he continues to use liquors to excess,[7] or while in the charge of a committee, is not incompetent to make a will.[8]

An habitual drunkard, even if at the time under the influence of liquor, may make a will if he comprehends the nature, extent, and disposition of his property, his relation to those who have or might have a claim on his bounty, and is free from undue influence, fraud, or coercion.[9]

[1] Howe *v.* Richards (Iowa), 83 N. W. Rep., 909.

[2] Peck *v.* Cary, 27 N. Y., 9; affirming 38 Barb., 77; *In re* Johnson's Will, 57 N. Y. State Rep., 846.

[3] Hennessy's Heirs *v.* Woulfe, 49 La. Ann., 1376; 22 So. Rep., 394; see Schierbaum *v.* Schemme, 157 Mo., 1; 57 S. W. R., 526; Ball *v.* Kane (Del.), 39 Atl. R., 788; *In re* Gilham's Estate (N. J.), 52 Atl. R., 690.

[4] Succession of Crouzeilles, 106 La., 442; 31 So. R., 64; see note to *In re* Miller (Pa.), 39 L. R. A., 220.

[5] Ct. of Errors, 1839, Gardner *v.* Gardner, 22 Wend., 526, rev'g 7 Paige; 112. But compare Burritt *v.* Silliman, 16 Barb., 198; rev'd 13 N. Y., 93.

[6] *In re* Ely's Est., 16 Misc. Rep. (N. Y.), 228; 39 N. Y. Supp., 177.

[7] *In re* Dugan's Est., 6 Pa. Dist. R., 222.

[8] Lewis *v.* Jones, 50 Barb., 645; *cf.* as to an adjudicated lunatic, *infra*, p. 525.

[9] Matter of Reed, 20 N. Y. Supp., 91; 2 Connolly, 403. But otherwise when there is no evidence that

If it does not appear but that the habitual drunkard was always able to talk coherently and understand what he was about, and it appears that he was entirely rational when the will, draughted by himself, was executed, it should not be rejected.[1]

A slight degree of intoxication and of mental and physical disease induced by habitual indulgence in intoxicants, will not necessarily destroy testamentary capacity.[2]

That testator was a drunkard does not prove his incapacity to make a will.[3]

UNDUE INFLUENCE.

On the one side the comfort of the weak, the dependent, and the aged depends largely on their testamentary capacity being sustained. If they cannot leave property to persons kind to them, they may often be left to suffer from want of kindness. On the other side, if a person of feeble intellect is to be so exposed to the coercion or fraud of others as by validating testamentary provisions made by him under the pressure of such coercion or fraud, then not only may his life be made miserable, but he may become instrumental in perpetrating great wrongs.[4]

While courts should see that the testamentary act is freely exercised by the aged, weak, and infirm without restraint, force, or fraud, so as to promote their own comfort and enjoyment, and should guard and protect them with the greatest care and circumspection from imposition and improper influence, they should hesitate to find that undue influence has been practised when the will is fair and reasonable, according to the common instincts of mankind, and such as might, with propriety and justice, be made by a decedent.[5]

he comprehended, and the facts justify an inference of undue influence. *In re* Rintelen, 37 Misc. R. (N. Y.), 562; 75 N. Y. Supp., 1062; aff'd, 78 N. Y. Supp., 1092.

[1] McLaughlin's Will, 2 Redf., N. Y. Surr. Ct., 504; Estate of Monneypenny, 1 Month. L. Bul., 7. Julke *v.* Adam, 1 Redf., 454.

[2] Fluck *v.* Rea, 51 N. J. Eq. (6 Dick.), 233; Bannister *v.* Jackson, 46 N. J. Eq. (1 Dick.), 593; affirming 45 N. J. Eq. (18 Stew.), 702; 17 Atl., 692; *In re* Sutherland's Will, 28 Misc. R., 424; 59 N. Y. Supp., 989.

[3] *Re* Levis's Estate, 140 Pa., 179; 21 Atl., 242; *In re* Halbert's Will, 15 Misc. R. (N. Y.), 308; 37 N. Y. Supp., 757; *In re* Schusler's Est., 198 Pa. St., 81; 47 Atl. Rep., 966.

[4] Wharton and Stillé's "Med. Jurisp.," 4th ed., Phil., 1882, vol. i., p. 20.

[5] Children's Aid Society of N. Y. *v.* Loveridge, 70 N. Y., 387.

An illustration is afforded by a New Jersey case in which the testatrix was ninety-eight years of age at the time she made the will in question. The caveator was a son of the testatrix; he resided not far from his mother. More than one unsuccessful attempt to procure an inquisition of lunacy against her in the last years of her life had been made and failed. The will gave the bulk of the property of testatrix to one child, and very little to her other children; yet this child was a daughter, with whom she had lived for many years, and who had taken care of her before and after she acquired her property upon the death of another son. No unsoundness or imbecility of mind was shown of a kind that approached to defects of testamentary capacity, nor was there any proof of any fraud, circumvention, or undue influence in procuring the will. The court held that there was no ground to sustain the appeal against the admission of the will to probate.[1]

Undue Influence to Preclude the Admission of Will to Probate.—*Undue influence* has been defined to be any means employed upon and with the testator, which, under the circumstances and conditions by which he was surrounded, he could not well resist, and which controlled his volition and induced him to do what otherwise would not have been done.[2] The means may be flattery, importunity, threats,[3] superiority of will, mind, or character, or whatsoever art, human thought, ingenuity, or cunning may employ which would give dominion over the will of the testator to such an extent as to destroy his free agency or constrain him to do against his will what he is unable to refuse.[4] Such influence the law condemns as undue when exercised by any one over the testamentary act, whether by direction or indirection, and whenever attained.[4]

[1] Collins *v.* Townley and Johnson, 21 N. J. Eq., 353.

[2] Chappell *v.* Trent, 90 Va., 849; 19 S. E. Rep., 314; Riley *v.* Sherwood, 144 Mo., 354; 45 S. W. Rep., 1077. But it must be the efficient cause without which the will would not have been made as it was made. *In re* Holman's Est., 70 Pac. R., 908. Where the testimony shows that testatrix was so far under the control of others as to exclude all individuality, all thought, and all action, it points to both undue influence and mental incapacity. Messner *v.* Elliott, 184 Pa. St., 41; 39 Atl. Rep., 46.

[3] See *in re* Sickles's Will (N. J. Pre.), 50 Atl. R., 577; Robinson *v.* Robinson, 203 Pa. St., 400; 53 Atl. R., 253.

[4] Dean *v.* Phillips, 22 Ky. Law Rep., 1621; 61 S. W Rep., 10; Oberdorfer *v.* Newberger (Ky.), 67 S. W. R., 267. In another case it was said that where through weakness, ignorance, or implicit reliance on the good faith of another the

Any general discussion of the subject of undue influence belongs to a treatise on wills. We are concerned here mainly with those aspects of it where the element of some mental unsoundness on the part of the testator is blended with the influence of a stronger mind.

Testamentary incapacity and undue influence are issues frequently interwoven in contested will cases; they often go hand in hand, and both questions can and should be submitted to the jury.[1]

Undue influence combined with mental weakness may incapacitate.—A weakness which would not, if solely to be considered, affect testamentary capacity, may, when combined with undue influence, lead to a decree refusing probate. Where there not only is, on the part of the testator, age, infirmity, and disease, but such advantage has been taken of his condition that the execution of will[2] or codicils may well be ascribed to necessity and compulsion rather than a voluntary disposition, they cannot stand, and must be refused probate.[3] The same was held true where similar influence was exercised upon a person who had just reached the age at which he could make a will, and was an invalid and weak in mind;[4] and where practised through the credulity inspired by a belief in the authority derived by the beneficiary from the spirits of the dead.[5]

Physical force is not necessary.[6] All influences are not unlawful, but pressure or importunity,[7] so exerted as to overpower

latter obtains an ascendency which prevents the exercise of an unbiassed judgment, undue influence exists; and though, if applied under ordinary circumstances such influence would be regarded as innocent, if it resulted in the particular case in a disposition contrary to testator's desire it was undue influence. Coghill *v.* Kennedy, 24 So. Rep., 459; 119 Ala., 641; see additional definition, of the same substantial import, in Gordon *v.* Burns, 153 Mo., 223; 54 S. W. Rep., 546; see case where testator signed to avoid anger of beneficiary, Edwards *v.* Millsaps, 70 S. W. R., 357 (Tex. Civ. App.).

[1] Dunaway *v.* Smoot, 67 S. W. R., 62; Smith *v.* Henline, 174 Ill., 184; 51 N. E. R., 227; but see *contra*, Givin *v.* Givin (Idaho), 48 Pac. R., 295. And, of course, it will be immaterial whether there was undue influence if the testator lacked testamentary capacity. Schieffelin *v.* Schieffelin (Ala.), 28 So. R., 687.

[2] Jones *v.* Simpson, 50 N. E. Rep., 940; 171 Mass., 474.

[3] Swenarton *v.* Hancock, 9 Abb. N. C., 326; mem. s. c., 84 N. Y., 653, affirming 22 Hun, 38; Coghill *v.* Kennedy, 24 So. Rep., 459; 119 Ala., 641.

[4] *In re* Curland, 15 Misc. Rep., 355 (N. Y.); 37 N. Y. Supp., 922.

[5] Orchardson *v.* Cofield, 171 Ill., 14; 49 N. E. Rep., 197; 40 L. R. A., 256.

[6] Estes *v.* Bridgforth, 21 So. Rep., 512; 114 Ala., 22.

[7] Ledwith *v.* Claffy, 18 App. Div., 115; 45 N. Y. Supp., 612.

the volition without convincing the judgment is a species of restraint; and importunity which the testator has not the strength of will to resist and to which he yields for peace and quiet, if carried to a degree in which his judgment, discretion, or wish are overborne, will constitute undue influence, though no force is used or threatened.[1] It must amount to overpersuasion, coercion, or force destroying the free agency of the testator[2] and contrary to his will, and which he was unable to refuse or too weak to resist.[3]

It must be made to appear that the importunity or influence was such as to deprive the testator, at the time, of the free exercise of his will.[4]

To invalidate for undue influence a will to which the testator has made a codicil it must be shown that such influence continued and operated on the mind of the testator at the time the codicil was executed.[5] This follows from the legal principle that the execution of a codicil amounts to a re-affirmation of the will to which the codicil relates. The time when the influence was exercised is immaterial, if it actually operated at the time of execution of the will.[6]

And generally such influence as will invalidate a will must be shown to have been exercised at or before the execution of the will[7] and in relation to the will.[8]

[1] See note 2, *supra*, p. 415; Robinson *v.* Robinson, 203 Pa., 400; 53 Atl. R., 253.

[2] McFadin *v.* Catron, 120 Mo., 252; 25 S. W. Rep., 506; see Schieffelin *v.* Schieffelin (Ala.), 28 So. Rep.. 687.

[3] Appeal of Turner, 72 Conn., 305; 44 Atl. R., 310; *in re* Gilham's Will (N. J. Pre.), 52 Atl. R., 690; Pritchard *v.* Henderson, 3 Penne. (Del.), 128; 50 Atl. R., 217; *cf.* Bacon *v.* Bacon (Mass.), 62 N. E. R., 990, where an instruction was held erroneous as recognizing influence upon a person competent to make a will if left alone to be undue influence.

[4] "Undue influence must be such as in some measure destroys the free agency of the testator, and prevents the exercise of that discretion which the law requires a party should possess, as essential to a valid testamentary disposition of the property," Johnson *v.* Armstrong (Ala.), 12 So. Rep., 72. Undue influence to render a will invalid must be connected with the execution of the will and operating at the time of its execution. Pooler *v.* Christman (Ill. Sup.), 34 N. E. Rep., 57; Robinson *v.* Robinson, 203 Pa. St., 400; 53 Atl. R., 253. The undue influence may be such as extends only to a part of the will. Morris *v.* Morton's Exrs. (Ky.), 20 S. W. Rep., 287. It is not the equivalent, however, of force or coercion. Higginbotham *v.* Higginbotham (Ala.), 17 So. Rep., 516.

[5] Campbell *v.* Barrera (Tex. Civ. App.), 32 S. W. Rep., 724; see Henvick *v.* Langford, 108 Cal., 608; 41 Pac. Rep., 701.

[6] Dunaway *v.* Smoot (Ky.), 67 S. W. R., 62.

[7] Gable *v.* Rauch, 50 S. C., 95; 27 S. E. Rep., 555.

[8] Schieffelin *v.* Schieffelin (Ala.), 28 So. Rep., 687; see same rule as to

Illustrations of Undue Influence Practised upon Persons Mentally Weak.—A woman, ninety-four years of age, suffering with a complaint which caused her intense pain when she was not under narcotics, which made her drowsy and lethargic or put her to sleep, being so enfeebled that she could not rise in bed or read or write, within four days of her death, and after her physician had pronounced her dying, at the instance of a nephew made a will which gave her entire estate to that nephew, taking it from her husband and only brother, between whom she had divided it by will about a month before. It did not appear that proponent had ever spoken with his aunt about a will, or anything except directions for her burial, which he said he could not follow unless he had some written authority. When deponent and his witnesses entered her room testatrix expressed surprise, and proponent said that there were some "papers to file," and began to speak of the place where she wished to be buried. Proponent and his mother testified that said will had been read to testatrix, but the latter's testimony was inconsistent. *Held*, that testatrix was induced to sign by fraud, and in ignorance of the paper's contents.[1]

A testatrix eighty-one years of age, but of sound disposing mind, having two sons, one of whom had five grandchildren, after going to reside with the other son revoked a previous will by which she had divided her estate equally between her sons, and executed a new will drawn by the one with whom she was living, and giving her estate to him, to the exclusion of her other son and all her grandchildren. *Held*, that on the question of undue influence in such a case as this it was proper to inquire into the reasons for such a disposition of the property; the probability that it was stimulated by the suggestions of those attending her, and the fact that they refused to allow the disinherited son to have private interviews with the testatrix were pertinent;

fraud: *in re* Benton's Est., 131 Cal., 472; 63 Pac. R., 775; *in re* Black's Est., 132 Cal., 392; 64 Pac. R., 695; *in re* Kaufman, 117 Cal., 288; 49 Pac., 192; *in re* Shell (Col.), 53 L. R. A., 387; 63 Pac. R., 413; *in re* Oberdorf, 2 Lack. Leg. N., 43; Pooler *v.* Christman, 145 Ill., 405; 34 N. E. Rep., 57; McCulloch *v.* Campbell, 49 Ark., 367; 5 S. W. Rep., 590. See *in re* Coleman's Est., 6 Pa. Dist. R., 535; Knox *v.* Knox, 95 Ala., 495; 11 So. R., 125. But *cf.* Steadman *v.* Steadman (Pa.), 14 Atl. R., 406; Hartman *v.* Strickler, 82 Va. R., 225; Overall *v.* Bland, 11 Ky. Law R., 371; 12 S. W. R., 273.

[1] N. J. Prerog. Ct., Hildreth *v.* Marshall, 51 N. J. Eq., 241; 27 Atl. Rep., 465.

and that under all the circumstances a verdict annulling the will for undue influence must be sustained.[1]

The question of undue influence is peculiarly one to be passed on by the jury, under proper instructions, and a verdict of undue influence will not be set aside on appeal unless palpably against the weight of evidence.[2] In the absence of any evidence of undue influence, it has been held reversible error for the court to instruct the jury on that subject at all.[3]

An action to nullify a will on the ground of undue influence may be barred by a statute of limitations.[4]

Undue influence has been exercised to procure the revocation and destruction of a will, in which case the revocation will be held void and proof of the contents of the will permitted.[5]

Undue influence affecting the whole will, though exerted only for the benefit of one beneficiary, invalidates the will.[6]

What Is not Undue Influence.—It is not undue influence for the beneficiaries to request a third person to induce the testator to make a will, nothing being said about what it is to contain;[7] nor to advise, persuade,[8] or appeal to the affections.[9] The test is whether the beneficiary has by fair means influenced rather than overcome, persuaded rather than compelled, the testator's judgment.[9] Even if the provision would not have been made without the beneficiary's solicitation, undue influence is not implied, for any one has a right to exercise all the honest arts of persuasion so long as he does not substitute his volition for that of the testator.[10]

[1] Marvin *v.* Marvin, 3 Abb. N. Y. Ct. of App. Dec., 192.

[2] Howat *v.* Howat's Exr., 19 Ky. Law R., 756; 41 S. W. Rep., 771. Appeal of Brooks, 68 Conn., 294; 36 Atl. Rep., 47; Campbell *v.* McQuiggan (N. J.), 34 Atl. R., 383.

[3] Boone *v.* Ritchie, 21 Ky. L. R., 864; 53 S. W. R., 518.

[4] See Zerega *v.* Percival (La.), 15 So. Rep., 476.

[5] See McIntosh *v.* Moore, 22 Tex. Civ. App., 22; 53 S. W. R., 611.

[6] Coghill *v.* Kennedy, 119 Ala., 641; 24 So. Rep., 459.

[7] *In re* Seagrist's Will, 1 App. Div. (N. Y.), 615; 37 N. Y. Supp., 496.

[8] For instance, a childless wife persuades her husband to leave her his whole estate; *in re* Cruger's Will, 36 Misc. R., 272; 73 N. Y. Supp., 412; *cf.* Campbell *v.* Carlisle, 162 Mo., 634; 63 S. W. R., 701.

[9] Sullivan *v.* Foley (Mich.), 70 N. W. R., 322; *in re* Halbert's Will, 15 Misc. (N. Y.), 308; 37 Supp., 757; Robinson *v.* Robinson, 203 Pa. St., 400; 53 Atl. R., 253; Barlow *v.* Waters, 16 Ky. L. R., 426; 28 S. W. R., 785; Appeal of Turner, 72 Conn., 305; 44 Atl. R., 310.

[10] Perkins *v.* Perkins (Iowa), 90 N. W. R., 55; Ketteman *v.* Metzger, 23 Ohio Cir. Ct., 61; *in re* Journeay's Will, 80 Hun (N. Y.), 315; 30 Supp., 80; Bevelot *v.* Lestrade, 153 Ill., 625; 38 N. E. R., 1056; Claussenius *v.* Claussenius, 179 Ill., 545; 53 N. E. R., 1006; Henrich *v.* Langford, 108 Cal., 608; 41 Pac. R., 701; Riley *v.*

It has been held not undue influence to excite to anger against another,[1] without employing any deceit.

Nor is influence undue which merely tends to induce the testator to make the will; the influence must be the operating cause of the will in order to be sufficient to overthrow it, and must subordinate the will of the testator to the will of the person exercising the influence.[2]

A provision in a will is not invalid on account of an attempt to exercise undue influence, if it does not appear that the attempt was the proximate cause of the provision.[3] And it must usually appear that the devisee improperly solicited the testator,[4] or wrote or procured the will to be written, or the allegation of undue influence will fail for lack of proof connecting the devisee with the will.[5]

Influence gained by kindness and affection will not be regarded as undue, in the absence of fraud or imposition, though it induce inequality and injustice, if it be voluntary on the part of the testator,[6] and this rule applies as well to friends as to relatives.[7]

Where the will is made under the Louisiana law the notary may address questions to develop and render the testator's expressed will more clear, and may suggest words, that testator may better express his intent, but these suggestions should not influence the disposition.[8] And such a will will not be annulled because the appropriate phraseology is suggested by the notary.[8]

Execution of a Will Procured by Fraudulent Devices.

Actual fraud also has the same effect in invalidating a will as undue influence; when it is practised, and the evidence shows it, the invalidity springs from the deceit or fraud operating to produce the execution of the testamentary instrument; it is not necessary, therefore, in such cases to show that the fraud

Sherwood, 144 Mo., 354; 45 S. W. R., 1077, Boggs *v.* Boggs (Neb.), 87 N. W. R., 39.

[1] *In re* Corbli's Will (N. J. Pre. Ct.), 52 Atl. R., 996; Salter *v.* Ely (N. J. Pre. Ct.), 56 N. J. Eq., 357; 39 Atl. R., 365.

[2] Bacon *v.* Bacon (Mass.), 62 N. E. Rep., 990.

[3] Trezevant *v.* Rains (Tex. Civ. App.), 25 S. W. R., 1092.

[4] Miller *v.* Oestrich, 157 Pa. St., 264; 27 Atl. R., 742.

[5] Harp *v.* Parr, 168 Ill., 459; 48 N. E. R., 113; Cutler *v.* Cutler, 103 Wis., 258; 79 N. W. R., 240.

[6] Towson *v.* Moore, 11 App. D. C., 377.

[7] Campbell *v.* Carlisle, 162 Mo., 634; 63 S. W. R., 701.

[8] Hennessy's Heirs *v.* Woulfe, 49 La. Ann., 1376; 22 So. Rep., 394.

"overpowered the volition without convincing the judgment."[1] Mental impairment usually plays a small part in such cases.

THE EFFECT OF MENTAL UNSOUNDNESS ON COMPETENCY OF WITNESSES.

INSANE PERSONS AS WITNESSES.

Insane persons during a lucid interval are competent witnesses.

The question of their competency is for the court to determine when the witness is produced to be sworn.[2] When a witness is produced, and it appears that he has been insane, and there is no evidence of recovery, the court should upon timely request inquire into his sanity, before permitting him to testify.[3] And upon such examination it is largely in the discretion of the court whether the witness will be permitted to testify.[3]

Where one offered as a witness has been adjudged insane, the inquiry of the court as to his competency is limited to his understanding of the obligations of an oath and his ability to comprehend the examination as a witness; if the court adjudges him competent as a witness on this examination, the effect of his insanity upon his credibility is then for the jury.[4]

Where one offered as a witness of what occurred in an insane asylum was a person who had been regularly committed as insane, and who had not been discharged, but allowed to leave on parole, he was, in Delaware, on examination by the court, held competent on his own showing, notwithstanding the opinion of the physician by whom he was committed and of a medical attendant at the asylum that he was incompetent.[5]

[1] For illustrations of the law in cases of fraud see *in re* Cummins's Est., 20 Pa. Co. Ct. R., 575; 7 Pa. Dist. R., 198; *in re* Burns's Will, 28 S. E. Rep., 519; 121 N. C., 336; but the evidence must show, before the will will be declared invalid for fraud, that the will is induced by the fraud, *in re* Benton's Est., 131 Cal., 472; 63 Pac. R., 775; but the particular time at which the fraud is practised is immaterial, if it so operates; mere false representations, therefore, will not, of themselves, constitute such fraud, *ibid.*

[2] City of Guthrie *v.* Shaffer (Okl.), 54 Pac. R., 698; see People *ex rel.* Norton *v.* N. Y. Hospital, 3 Abb. N. C., 229, and authorities cited in opinion and in note, in which the proper practice in such cases is fully described and explained.

[3] Mills *v.* Cook, 57 S. W. Rep., 81 (Tex. Civ. App.).

[4] Wright *v.* Southern Exp. Co., 80 Fed. Rep., 85; see same case for effect of failure to conduct preliminary examination of such witness. Pittsburgh, etc., Ry. Co. *v.* Thompson, 82 Fed. Rep., 720; 27 C. C. A., 333.

[5] State *v.* Brown, 36 Atl. Rep., 458; see *infra*, p. 529, upon opinion evi-

And where a person offered as a witness had been judicially declared insane and was still an inmate of an asylum, it was held that while he was not therefore necessarily incompetent as a witness, still it was *prima-facie* evidence of disqualification, and cast the burden of proving his competency on the party offering him. And it was proper for the court to hear evidence as to his mental unsoundness and to allow him to be examined on the questions at issue in the suit to determine the extent of the impairment of his mind and memory; if it appears that he suffers from a delusion, but his evidence is clear, coherent, and consistent, it may be admitted and then the question of its weight is for the jury.[1]

Where a prosecuting witness was adjudged insane on the day of a verdict, that fact did not render incompetent his declarations made two months before, there being nothing to indicate that he was not then sane.[2]

In California, where the statute authorizes a discharge of a person from an insane asylum on the ground of restoration or of improper commitment, the fact of discharge was held *prima-facie* evidence of restoration so as to make a person a competent witness.[3]

Although a witness had been judicially declared to be of feeble mind, he was nevertheless held a competent witness where the nature and extent of the impairment was not shown, and it appeared that at the time of testifying he had an intelligent appreciation of his responsibility as a witness, and the testimony of other witnesses showed that he had a fair recollection and understanding of the matters involved in his testimony.[4]

Where in order to impeach the competency and credibility of a witness by evidence of his insanity, testimony was offered of prior temporary delusions and of insanity of ancestors and relatives, it was held that this was insufficient to take the question of his sanity to the jury, and that in the absence of other evidence it was not error to reject it.[5]

In Texas, it is provided under the Code of Criminal Proce-

dence on the mental competency of witnesses.

[1] Pittsburgh & W. Ry. Co. *v.* Thompson, 82 Fed. Rep., 720; 27 C. C. A., 333.

[2] State *v.* Smith, 26 Wash., 354; 37 Pac. R., 70.

[3] Clements *v.* McGinn (Cal.), 33 Pac. Rep., 920.

[4] Tucker *v.* Shaw, 158 Ill., 326; 41 N. E. Rep., 914.

[5] State *v.* Hayward, 65 N. W. Rep., 63; 62 Minn., 474.

dure, article 768 (formerly artiele 730, subdivisions 1 and 2), that persons who are insane when they are offered as witnesses, or who were insane when the event happened of whieh they are called to testify, are incompetent as witnesses; aecordingly, it has been held that an insane woman cannot testify as to a rape alleged to have been committed on her.[1]

In Ohio, a statute exeepts persons of unsound mind from those who are competent as witnesses.[2] This is held to be merely deelaratory of the common law, which requires that the unsoundness be sueh that the witness is ineapable of understanding the nature of an oath or giving a coherent statement of the matter on whieh he is examined.[3]

In Oklahoma, a similar statute was interpreted to mean persons whose minds are so defeetive that they cannot correetly relate faets and do not understand or realize what they are saying or doing.[4]

The eharaeter of the evidence whieh is admitted to determine the eompeteney of witnesses is illustrated by the cases eited. It permits the examination of medieal men in charge of an asylum where the witness is eonfined.[5]

In a direct inquiry into lunacy the alleged ineompetent cannot be examined as to faets without administering to him the oath,[6] nor as to faets on which the jury are not to aet.[6]

INTOXICATED PERSONS AS WITNESSES.

Intoxieation is said to go, not to the competency of a witness who is intoxieated while testifying, but to his credibility;[7] probably, however, this is not true where his intoxieation is sueh as to deprive him of the understanding of the nature of an oath, or of the nature of the examination.

[1] Lopez *v.* State, 30 Tex. App., 487; 17 S. W. R., 1058; and where the indictment charges that the woman was so mentally diseased as to have no will to oppose the act of carnal knowledge she is not a competent witness to prove the offence, Lee *v.* State (Tex. Cr. App.), 64 S. W. R., 1047; see *infra*, p. 000.

[2] Rev. St. Ohio, § 5240.

[3] Pittsburgh, etc., Ry.Co. *v.* Thompson, 82 Fed. Rep., 720; 27 C. C. A., 333. And *cf.* State *v.* Simes, 12 Ida., 310; 85 Par., 914.

[4] City of Guthrie *v.* Shaffer (Ok.), 54 Pac. R., 698.

[5] Pittsburgh, etc., Ry. Co. *v.* Thompson, 82 Fed. Rep., 720; 27 C. C. A., 333; see *infra*, p. 531, n. 5, as to the limits upon such examination.

[6] *In re* Rush, 53 N. Y. Supp., 581.

[7] Myers *v.* State (Tex. Cr. App.), 39 S. W. Rep., 111.

PERSONS STUPEFIED BY DRUGS AS WITNESSES.

It is apprehended that, in general, the rules applicable to intoxicated witnesses apply. In Texas, a statute renders incompetent as witnesses persons who were insane at the time of the events as to which they are interrogated.[1] This was held not to disqualify a person who was stupefied by drugs.[2]

THE EFFECT OF MENTAL UNSOUNDNESS ON INCUMBENCY OF OFFICE.

INSANITY VACATES AN OFFICE.

It has been a mooted question whether the insanity of the incumbent of a public office renders such office vacant so that a successor can be appointed. This question has been fully considered by the Supreme Court of the State of Kentucky, under a statute providing that the term "vacancy in office" means such as exists "when there is an unexpired term without a lawful incumbent." The court held that an adjudication that one holding the office of assessor was a lunatic, and that he should be confined in an asylum, created a vacancy in his office.[3]

VOLUNTARY INTOXICATION while in the performance of an official duty has been held to be legal ground for removal;[4] so, also, habits of intemperance.[5]

THE EFFECT OF MENTAL UNSOUNDNESS ON LIABILITY TO TAXATION.

On the principle of equality of taxation, there is no distinction between the liability of a lunatic's property and of the property of others; but the question of the sufficiency of notice may become a matter of controversy.

[1] Code Cr. Pro., Art. 768.

[2] Pones *v.* State (Tex. Cr. App.), 63 S. W. Rep., 1021.

[3] Long *v.* Bowen, 94 Ky., 540; 23 S. W. Rep., 343. On the effect of insanity upon the office of administration and the procedure for the appointment of a successor see *in re* Blinn, 99 Cal. 216; 33 Pac. Rep., 841.

[4] State *v.* Welsh (Iowa), 79 N. W. Rep., 369.

[5] *In re* Peters (Pa.), 10 Kulp., 93.

In Kentucky, where a statute (Ky. St., § 3749) provides for punishment of an officer intoxicated while in the discharge of his duties or so drunk as to be disqualified from discharging the duties of his office, he may be punished though he never be drunk while attempting to perform any official act. Johnson *v.* Commonwealth, 23 Ky. Law R., 856; 64 S. W. R., 467.

Where a person who has not been adjudged insane, even though he be insane, owns property subject to taxation, and due notice is given him, and the property is assessed by a proper officer, the assessment is *prima facie* valid.[1]

In Indiana, a special rule is provided in favor of idiots or insane persons to enable them to redeem land from tax sales within two years from the removal of their disabilities,[2] and a court cannot order a sale to satisfy the tax purchaser's lien.[3]

In West Virginia, an insane person may redeem from a tax sale within one year from the removal of his disability, but this does not deprive his committee of the power to redeem.[4]

In Iowa, a judgment against an insane owner, at the suit of grantees at a tax sale, clearing their title, was set aside after his death at the suit of his heirs.[5]

THE EFFECT OF MENTAL UNSOUNDNESS ON CIVIL LIABILITY.

LIABILITY OF INSANE PERSON FOR HIS OWN TORTS.

An insane person is liable in damages for any torts that he may commit.[6] The damages are limited to an amount sufficient to compensate the injured party for the actual injury suffered, and punitive damages cannot be recovered in such cases.[7] Although a lunatic is not punishable criminally, he is liable in a civil action for any tort he may commit,[8] including libel and slander,[9] except those depending upon actual malice.

In Jewell *v.* Colby (N. H.)[10] it was held that an insane person is liable for causing the death of another by an act which would

[1] Hennell *v.* Board of Comrs., 132 Ind., 32; 31 N. E. R., 462. And see also People *v.* Barker (N. Y. Sup. Ct.), 67 Hun, 649; 33 N. E. R., 745.

[2] Ristine *v.* Johnson, 143 Ind., 44; 42 N. E. Rep., 310, Rev. St., 1894, §§ 8610, 8611.

[3] Wagner *v.* Stewart, 143 Ind., 78; 42 N. E. Rep., 469.

[4] Powell *v.* Smallwood, 37 S. E. Rep., 551.

[5] Hawley *v.* Griffin, 92 N. W. R., 113.

[6] *Re* Wolf, 9 Kulp., 523; Avery *v.* Wilson, 20 Fed. R., 856; White *v.* Farley, 81 Ala., 563; 8 So. Rep., 215; McIntyre *v.* Sholty, 121 Ill., 660; 13 N. E. Rep., 239; Behrens *v.* McKenzie, 23 Iowa, 333; 92 Am. Dec., 428; Cross *v.* Kent, 32 Md., 581; Morain *v.* Devlin, 132 Mass., 87; 42 Am. R., 423; Ward *v.* Conatser, 4 Baxt. (Tenn.), 64; Morse *v.* Crawford, 17 Vt., 499; 44 Am. Dec., 349.

[7] Krom *v.* Schoonmaker, 3 Barb., 647; Ullrich *v.* N. Y. Press Co., *infra*.

[8] McIntyre *v.* Sholty, 121 Ill., 660; 13 N. E. R., 239.

[9] Ullrich *v.* N. Y. Press Co., 23 Misc. Rep. (N. Y.), 168; 50 N. Y. Supp., 788.

[10] 24 Atl., 902; 66 N. H., 399.

be felonious except for his insanity, and that in an action against an insane person for his torts the damages are limited to the actual loss sustained.

In Williams *v.* Hays[1] the court said that an insane person is liable for his torts the same as a sane person, except for those torts in which malice, and therefore intention, is a necessary ingredient. In respect to this liability there is no distinction between torts of non-feasance and malfeasance, and so an insane person is liable for injuries caused by his tortious negligence, and so far as this liability is concerned, is held to the same degree of care and diligence as a person of sound mind. But on a second appeal it was held that the defendant was not liable, it appearing that the insanity was caused by the stress of his efforts to save a ship, lost as the result of his negligence during temporary insanity solely so caused.[2]

In Mutual Fire Ins. Co. *v.* Showalter[3] an insurer who had paid a loss by fire occasioned by a lunatic was permitted to recover from the lunatic.

But where the mental unsoundness is caused by the person on whom the injury is inflicted, he and those who would also ordinarily have rights of action with respect to such injury, cannot recover; for example, where a father sued for causing the death of his son, and it appeared that deceased had attacked the defendant and impaired his consciousness and while in that state defendant committed the wrongful act, the act of the deceased excused the defendant from liability to the plaintiff.[4]

LIABILITY OF OTHERS FOR THE TORTS OF INSANE PERSONS.

A person may owe a duty to another to protect him from the injurious acts of an insane person. Meyer *v.* Saint Louis I. M. & S. Ry. Co.[5] was an action against the railroad company for the killing of plaintiff's intestate by an insane passenger. There was proof that the insane passenger was recognized by the offi-

[1] 143 N. Y., 442; 38 N. E. R., 449; 26 L. R. A., 153.

[2] Williams *v.* Hays, 157 N. Y., 541; 52 N. E. Rep., 589, reversing contrary statement of the law in 2 App. Div., 183; 37 N. Y. Supp., 708; Feld *v.* Borodofski, 87 Miss., 72; 40 So. R., 816.

[3] 3 Pa. Super. Ct., 452; 40 W. N. C., 80.

[4] Jenkins *v.* Hankins, 98 Tenn., 545; 41 S. W. Rep., 1028.

[5] 54 Fed. Rep., 116.

cials of the car as having been transported over the line nineteen days before, at which time he was in chains and violent, and in charge of police officials. He was unattended at the time of the killing and had made various remarks, etc., indicative of his insanity. The company was held bound to exercise the highest degree of care. An instruction that the railroad company had no right to refuse transportation on suspicion that a person was dangerous to others from insanity or any other cause, if such person at the time of offering to become a passenger was apparently harmless and conducted himself in no way different from other passengers applying for passage, was held to be erroneous; and it was said that a reasonable possibility, as well as probability of danger, might require action on the part of the carrier, and in order to charge the company with the duty of restraint it need not have been foreseen that the killing would take place without such restraint.

When one of several conspirators is insane, his co-conspirators are none the less liable for his acts in furtherance of the conspiracy.[1]

LIABILITY OF ATTENDANTS FOR THE ACTS OF THE INSANE UNDER THEIR CARE; LIABILITY TO SUCH INSANE PERSONS.

Such liability becomes a question of interest when it is sought to hold the attendant responsible for negligence in permitting his patient to do or suffer injury. The duty of the attendant is to exercise a degree of care commensurate with his undertaking, but the law imposes no unreasonable obligation.[2]

[1] Tucker *v.* Hyatt, 51 N. E. Rep., 469; 151 Ind., 332.

[2] See *Presumptions*, p. 549, *infra;* see for method of pleading facts to show obligation, Walter *v.* Mitchell (Mont.), 65 Pac. R., 5; and see Herr *v.* Cent. Ky. Lun. Asyl., 17 Ky. L. R., 320; 30 S. W. R., 971. For the rules of liability of institutions for the care of the insane for the negligent injury of patients see *infra*, Care and Custody of Incompetent Persons, p. 606. It has been generally held that eleemosynary institutions are not liable. Farnham *v.* Pierce, 141 Mass., 203; Perry *v.* House of Refuge, 63 Md., 20; Fire Ins. Patrol *v.* Boyd, 120 Pa. St., 624; Downs *v.* Harper Hosp. (Mich.), 60 N. W. R., 421; Leavell *v.* W. Ky. Asy. for Ins., 28 Ky. L. R., 1129; 91 S. W. R., 671; Corbett *v.* St. Vincent's In. S., 177 N. Y. 16; and the State is not liable for the negligence of an attendant in one of its state hospitals for the insane, Martin *v.* State of N. Y., 120 App. Div. (N. Y.), 633. See on this subject Care and Custody of Incompetent Persons, *infra*, p. 606.

Torts of Others Against Insane Persons.

It is tortious to acquire property from a lunatic incapable of understanding the transaction, if the grantee knows of the lunacy and takes advantage of it to obtain the property.[1]

INTOXICATION IN ITS RELATION TO TORTS, ESPECIALLY NEGLIGENCE.

Intoxication, if it in no way causes an accident,[2] does not of itself constitute contributory negligence;[3] it is error to instruct a jury that if plaintiff was intoxicated he cannot recover, for intoxication is not negligence as a matter of law.[4] As bearing on the question of contributory negligence, intoxication may be a fact to be considered,[5] but even though it be a statutory offence, it in no way affects the duty of care owed to such a person, except perhaps to require an unusual degree of care to prevent injury to an intoxicated person, whose ability to look out for himself is thereby diminished.[6] On the other hand, an intoxicated person may not plead his own condition to avoid the consequences of his negligence which actually contributed to the accident to himself.[7] He is held to the same degree of care for himself as a sober person, at least where the defendant had no notice of his condition.[8] Nor can he recover if his intoxication was the cause of the accident,[9] or contributed to it, through his voluntary exposure to danger, where ordinary prudence on his part could have avoided it;[10] unless, notwithstanding his intoxication and negligence, the tort-feasor by the exercise of due care after discovering his condition could have prevented the injury.[11]

[1] Sander *v.* Savage, 75 App. Div. (N. Y.), 333; 78 N. Y. Supp., 189.

[2] Galveston, etc., Ry. Co. *v.* Harris, 22 Tex. Civ. App., 16; 53 S. W. R., 599.

[3] Ward *v.* Chicago, St. P., M. & O. Ry. Co., 85 Wis., 601; 55 N. W. R., 771; Morris *v.* Eighth Av. R. Co., 68 Hun (N. Y.), 39; 22 Supp., 666; Sylvester *v.* Town of Casey (Iowa), 81 N. W. R., 455.

[4] Kingston *v.* Fort Wayne, etc., R. Co., 112 Mich., 40; 70 N. W. R., 315.

[5] Trumbull *v.* Erickson, 97 Fed. Rep., 891; 38 C. C. A., 536; Wabash Ry. Co. *v.* Monegan, 94 Ill. App., 82.

[6] Wheeler *v.* Grand Trunk R. Co., 70 N. H., 607; 50 Atl. R., 103; 54 L. R. A., 955.

[7] Denver Tramway Co. *v.* Reid, (Col.), 35 Pac. R., 269.

[8] Louisville & N. R. Co. *v.* Cummins Admr., 23 Ky. L. R., 681; 63 S. W. R., 594.

[9] Galveston, etc., Ry. Co. *v.* Harris, 22 Tex. Civ. App., 16; 53 S. W. Rep., 599; see Ronker *v.* St. John, 21 Ohio C. C., 339.

[10] Bageard *v.* Consolidated Traction Co. (N. J.), 45 Atl. R., 620.

[11] Wheeler *v.* Grand Trunk Ry. Co., 70 N. H., 607; 50 Atl. R., 103; 54 L. R. A., 955.

Whether drinking has contributed to a negligent injury is properly left to a jury to determine.[1]

Where an intoxicated person falls on a railroad track, he becomes a trespasser and the railroad company is not liable if it uses due care to prevent injury after it discovers him,[2] though injury ensues notwithstanding such care.[2] An employer is not chargeable with neglect of duty to an intoxicated employee, if unaware, personally, or through the knowledge of his servants, of his condition.[3]

In some States it is a misdemeanor to give or sell liquor to an intoxicated person, and in some a right of action therefor or for the sale of intoxicating liquors is given to an injured person. In Indiana, an extreme illustration of the extent of this right is afforded by the case of Homire *v.* Halfman,[4] where the wife of an intoxicated man recovered damages from a saloon-keeper for loss of support, because her husband while drunk had obtained liquor from defendant and had then committed a homicide while drunk, and was convicted therefor and sentenced to imprisonment.

THE EFFECT OF MENTAL UNSOUNDNESS ON RESPONSIBILITY FOR CRIME.[5]

It is not within the scope of this article to discuss at length the methods of legal practice in *the treatment of insane persons accused or convicted of crime.* They will be found in works on crimes, and in the statutes of the several States (see this volume, p. 607 *et seq.*).[6]

[1] Bradwell *v.* Pittsburgh & W. E. Pass. Ry. Co., 153 Pa. St., 105; 25 Atl. Rep., 623; see Rhyner *v.* Menasha, 73 N. W. Rep., 41; 97 Wis., 523.

[2] Louisiana W. E. Ry. Co. *v.* McDonald (Tex. Civ. App.), 52 S. W. Rep., 649.

[3] Parker *v.* Winona & St. P. R. Co., 83 Minn., 212; 86 N. W. Rep., 2.

[4] 156 Ind., 470; 60 N. E. Rep., 154; see also for examples of the statutory remedies for injury resulting to the drunkard or a third person from the sale of intoxicating liquors and the limits and application of such remedies: Waxmuth *v.* McDonald, 96 Ill. App., 242; Gardner *v.* Day, 95 Me., 558; 50 Atl. R., 892; McNary *v.* Blackburn, 180 Mass., 141; 61 N. E. Rep., 885; Breeding *v.* Jordan (Iowa), 88 N. W. R., 1090; Lucas *v.* Johnson (Tex. Civ. App.), 64 S. W. R., 823; Bellison *v.* Apland (Iowa), 89 N. W. Rep., 22; Boydan *v.* Haberstumpf, 8 Det. Leg. N., 906; 88 N. W. R., 386; Borgasen *v.* Eklund, 96 Ill. App., 443; Stafford *v.* Levinger (S. D.), 91 N. W. R., 462; Jaroszewski *v.* Allen (Iowa), 91 N. W. R., 941.

[5] For the treatment of persons insane at the time of trial see statutes.

[6] But the practice, which varies in the several States, is illustrated by the following recent cases:

California. People *v.* Geiger, 116

Cal., 440; 48 Pac. Rep., 389; People *v.* Knott, 122 Cal., 410; 55 Pac. Rep., 154; People *v.* Lee Fook, 85 Cal., 300; 24 Pac. R., 654; People *v.* Travers, 88 Cal., 233; 26 Pac. R., 88. See also *infra*, p. 433.

Georgia. Carr *v.* State, 98 Ga., 89; 27 S. E. Rep., 148.

Louisiana. State *v.* Judge 8th Jud. Dist., 48 La. Ann., 503; 19 So. Rep., 475; State *v.* Paine, 49 La. Ann., 1092; 22 So. Rep. 316; *In re* Chandler, 45 La. Ann., 696; 12 So. R. 884 (investigation of sanity after verdict, before sentence).

Massachusetts. *In re* Le Donne, 173 Mass., 550; 54 N. E. R., 244 (custody of insane convict after expiration of sentence).

Mississippi. Caffey *v.* State, 78 Miss., 645; 29 So. Rep., 396. In Mississippi, where a person was acquitted on the ground of insanity, and the jury certified that he was still insane and dangerous, he was senteneed under the law (Code, § 1468) to be confined in an insane asylum, notwithstanding he was an epileptie and his fits and insanity reeurred only at irregular intervals, he at other times being sane.

Missouri. State *v.* Pennington, 146 Mo., 27; 47 S. W. Rep., 799; Shields *v.* Johnson, 47 S. W. Rep., 107.

Montana. State *v.* Peterson, 60 Pac. Rep., 809.

Nebraska. Walker *v.* State, 46 Neb., 25; 64 N. W. Rep., 357.

New York. People *v.* McElvaine, 125 N. Y., 596; 26 N. E. R., 929 (discretionary with court to appoint eommission to inquire of sanity at time of eommission of crime); *Re* Isabella Jenisch, 3 Abb. N. C., 200; People *v.* Beno Ville, 3 Abb. N. C., 195 (examples of commissions appointed under N. Y. law to inquire into insanity of aeeused). See Code Cr. Pro., § 196, examination of sanity of person senteneed to death.

Ohio. State *v.* O'Grady, 3 Ohio N. P., 279; Broek *v.* State, 22 Ohio Cir. Ct. R., 364 (trial after restoration of sound mental eondition); Rosselot *v.* State, 23 Ohio C. C., 370. In Ohio a separate trial by *jury* of the question whether one put on trial is sufficiently sane to proceed is accorded (R. S., § 7240); therefore, where a *judge* determines that defendant is sufficiently sane to proceed, a verdiet of guilty will be reversed.

Oklahoma. Maass *v.* Phillips, 61 Pac. Rep., 1057.

Pennsylvania. Baranoski's ease, 9 Pa. Co. Ct., 264 (inquiry into insanity of eonviets); Com. *v.* Schmons, 162 Pa. St., 326; 29 Atl. R., 644 (disregard of plea of insanity when eonvict ealled for sentence); Com. *v.* Buceieri, 153 Pa. St., 535; 32 W. N. C., 113; 26 Atl. R., 228 (ditto).

Texas. Chase *v.* State (Tex. Cr. App.), 55 S. W. Rep., 833 (effeet of finding of insanity at preliminary inquiry no bar to subsequent trial for the crime); Lenno *v.* State (Tex. Cr. App.), 68 S. W. Rep., 684 (trial notwithstanding suggestion of insanity).

United States. United States *v.* German, 115 Fed. R., 987 (Ky. Dist.) (On preliminary finding of insanity jury must be unanimous, to require action of court).

Vermont. State *v.* Kelley (Vt.), 52 Atl. R., 434 (insanity suggested, but no preliminary trial of that question requested).

Virginia. Stover *v.* Commonwealth, 92 Va., 780; 22 S. E. R., 874.

West Virginia. State *v.* Harrison, 36 W. Va., 729; 15 S. E. R., 982 (within court's diseretion whether it will first order a jury to inquire into sanity).

Wiseonsin. Freneh *v.* State, 93 Wis. 325; 67 N. W. Rep. 706; Freneh *v.* State, 85 Wis., 400; 55 N. W. R., 566 (error to allow plea of insanity and not guilty to proeeed before same jury under law for trial of speeial issue of insanity).

See this work, vol. iii., p. 579, for a diseussion of the laws regulating the Care and Custody of Ineompetent Persons.

INSANITY AS A DEFENCE TO CRIMINAL PROSECUTION.

Introductory Outline of the Law.[1]—The prevailing theory of the law in this country and in England is that capacity to know the nature, quality, and right and wrong of the act committed is the only test as to responsibility for crime.[2] The common law holds every man as sane until proof to the contrary is shown by the party pleading insanity as a defence.[3]

The above rule holds good whether there is total or partial impairment of the intellect,[4] and though the accused may have been sane on other subjects than that of the criminal act he committed;[5] it holds good to the extent of making him responsible if he falls within it, even though he may be insane according to medical science on other subjects and in other respects.[6]

The doctrine that a reasonable doubt in the minds of the jury of the sanity of the accused requires an acquittal is accepted in various States.[7] But evidence of loss of control of the will, or of morbid impulse, does not constitute a defence except when it demonstrates mental unsoundness of such a character as to destroy the power of distinguishing between right and wrong as to the particular act.[8] The theory that loss of will power, or morbid impulse, is an excuse for crime, though generally repudiated by our decisions[9] and never recognized by our statutes, in practice often dominates juries in rendering their verdicts. For

[1] See introductory exposition of the reasons for the difference between medical and legal views of mental responsibility, *supra*, p. 349. See *supra*, p. 427, for responsibility in tort of conspirators for acts of insane conspirator.

[2] McNaghten's case, 10 Clark & F., H. L. Cas., 200; 1 Car. & K., 130; Flanagan *v.* People, 52 N. Y., 467; 10 Am. R., 731; Lee *v.* State (Ga.), 42 S. E. R., 759. Note that even incapacity may be no excuse if caused by drunkenness, drugs, etc. (*infra*, page 481 ff.), and not by mental disease.

[3] But the insanity is at most to be proved only to the *satisfaction* of the jury, and a charge to the jury which leaves this element out is erroneous. Genz *v.* State, 34 Atl. R., 816; 58 N. J. Law, 482; see *infra*, p. 560, Satisfaction of the Jury.

[4] Carr *v.* State, 96 Ga., 284; 22 S. E. R., 570; State *v.* Palmer, 161 Mo., 152; 61 S. W. R., 651.

[5] Ford *v.* State, 73 Miss., 734; 19 So. R., 665.

[6] State *v.* Kalb, 7 Ohio N. P., 547; 5 Ohio S. & C. P. Dec., 738; State *v.* Tyler, 7 Ohio N. P., 443; 5 Ohio S. & C. P. Dec., 588. Therefore, it is not error to refuse to charge a jury that if a man is insane he is irresponsible and should be acquitted of crime, People *v.* Beverly (Mich.), 66 N. W. R., 379; People *v.* Silverman, 181 N. Y., 235.

[7] See *infra*, p. 559.

[8] By the weight of authority. But see *infra*, p. 455.

[9] But see *infra*, p. 455, and *supra*, p. 350.

in countries where English law obtains the jury may acquit the prisoner, in disregard, if it pleases, of all instructions of the presiding justice and contrary to all established or enacted law; and the prosecution has no appeal. Thus, the system of trial by jury operates as a modification or restraint upon the absolutism of general law. However deplorable certain instances may be where verdicts have gone upon "the unwritten law," or like extra-legal superstition, the "quality of mercy" which characterizes the jury is its chief merit and the strongest argument for its continuance, in criminal cases. Of late, courts and statutes have conceded that intoxication may affect the element of premeditation or intent in homicide cases,[1] and may, therefore, be considered in fixing the degree of crime, and hence the amount of punishment to be inflicted, in all cases requiring proof of criminal intent. This principle of partial responsibility regulating the grade of punishment has been thoroughly discussed by Casper-Liman [2] and other text-book writers. Many years ago, in Dr. E. J. Munro's testimony in the classical McNaghten case,[3] the opinion was expressed that monomania may coexist with general sanity, or even with a high degree of intellect, or with a normal perception of right and wrong, and with knowledge of murder to be a crime. The doctor testified that "he had not the slightest doubt that the prisoner's usual perception was impaired in consequence of his delusion, and that his mind was so absorbed by the contemplation of his fancied wrongs that he did not distinguish between right and wrong." This seems to be the present status of medical opinion on this subject, but an important distinction must be drawn between the fact of insanity and the question of legal responsibility. Moved by the desire of protecting society, the courts almost invariably hold that unless the mental unsoundness is of such character or degree as to deprive the mind of the ability of knowing the quality and consequences of the act done and that it was wrong, there shall be legal responsibility. This rule is the legal essence of the whole matter, and it avoids much of the confusion which the German jurists and metaphysicians have infused into this subject.[4]

[1] See *infra*, p. 488.

[2] Casper-Liman, "Handb. d. ger. Med." (9th ed.), vol. 3, p. 11 *et seq.*

[3] 10 Clark and Finnelly, H. L. Cases, 200; 1 Car. & K., 130. See *infra*, p. 467.

[4] *Cf.* Dr. Mittermaier's discussion of the subject, translated in 22 Am. Jur., 311, 317.

The Practice in Such Cases.—While it is not within the scope of this article to treat in detail of mere matters of practice with respect to mental unsoundness, it is deemed proper to refer in the subjoined note to a few cases which illustrate the practice with respect to the defence of insanity in some substantial particulars.[1]

[1] JURY TRIAL.—The right to *trial by an impartial jury* is illustrated by French *v.* State, 55 N. W. 566; 85 Wis., 400, where it was held a denial of lawful rights of the accused to try him on the plea of not guilty before a jury which had already disagreed on his special plea of insanity. See State *v.* Judge 8th Jud. Dist., 48 La. Ann., 503; 19 So. Rep., 475.

PLEA OF INSANITY.—In some jurisdictions insanity as a defence must be *specially pleaded;* in such jurisdictions, in the absence of the special plea, evidence of insanity will be excluded. See Walker *v.* State, 36 N. E. Rep., 356; 136 Ind., 663; People *v.* Davis (Cal.), 36 Pac. Rep., 96; Ward *v.* State, 96 Ala., 100; 11 So. Rep., 217. See as to issue of insanity at time of trial, People *v.* McCarthy, 115 Cal., 255; 46 Pac. Rep., 1073. In Texas, the penal code (Art. 518) provides that a plea of guilty shall not be received unless defendant is sane; where a defendant pleaded guilty and his counsel moved for a new trial on the ground of his insanity, the new trial was refused, because his counsel were aware at the time of his trial of the testimony upon which they relied on their motion. Burton *v.* State, 25 S. W. Rep., 782; 33 Tex. Cr., 138.

INSANITY AFTER CONVICTION.—Though a person may not have been insane at the time of the commission of a crime, if he becomes *insane after conviction* and before sentence, it is contrary to the policy of the law to inflict the penalty of his crime while he remains insane.

But the examination into his sanity at such time is no longer regarded or treated as a right, but rather as a matter of indulgence, in which the action of the court is final and not subject to review. See Commonwealth *v.* Schmous, 162 Pa. St., 326; 29 Atl. Rep., 644; and in such case, in the exercise of its discretion, another court to which application is made for a commission of lunacy will decline to issue it—so held where the alleged lunatic had no estate and was incarcerated under conviction of murder, punishable with death. *In re* Clifford (N. J. Ch.), 41 Atl. Rep., 356; 57 N. J. Eq., 14.

PROCUREMENT OF EVIDENCE AS TO INSANITY OF ACCUSED.—In State *v.* Crisp (Mo.), 29 S. W. Rep., 699, the court, after a trial had been delayed for three years, was held justified in refusing to adjourn the trial to enable defendant's physicians to examine him so as to express an opinion as to his sanity; while in Claxon *v.* Commonwealth, 30 S. W. Rep., 998, 17 Ky. Law R., 284, it was held error to refuse a continuance to obtain evidence of the insanity of the accused where his counsel was appointed during the trial.

ABUSE OF DEFENCE OF INSANITY.—In California it was held proper to refuse an instruction that the plea of insanity has led to abuse in the administration of justice, and which advised the jury that it must be examined with care. Marceau *v.* Travellers Ins., 35 Pac. Rep., 856. On the other hand, where the following instruction was given it was held not improper, viz.: that the defence of insanity is often resorted to when other means of escaping punishment is hopeless, and, though when satisfactorily established it must commend itself to the justice of the jury, they must examine it with care lest a mere counterfeit of mental infirmity furnish immunity from guilt. People *v.* Larrabee, 115 Cal., 158; 46 Pac. Rep., 922. See also People *v.* McCarthy, 115 Cal., 255; 46 Pac. Rep., 1073; People *v.* Kloss, 115 Cal., 567; 47 Pac. Rep., 459; People *v.* Allender, 48 Pac. Rep., 1014;

A Statement of the Leading Authorities and Cases.—Insanity as a defence to a criminal prosecution implies such a defective mental condition that the defendant did not know the act he was committing to be unlawful and morally wrong, and had not reason sufficient to apply such knowledge and to be controlled by it.[1]

The Penal Code of the State of New York (section 20) provides that: "An act done by a person who is an idiot, lunatic, or insane, is not a crime." And in section 21: "A person is not excused from criminal liability as an idiot, imbecile, lunatic, or insane person, except upon proof that at the time of committing the alleged criminal act he was laboring under such a defect of reason as either (1) not to know the nature and quality of the act he was doing; or (2) not to know that the act was wrong."[2] This statute preserves essentially the rule of the common law.[3]

Unless a defendant, however insane he may be, can be brought within the rule, he is treated the same as a sane person. Therefore, insanity as a defence is not inconsistent with self-defence,[4] and the law of self-defence is applicable alike to insane and sane. Nor is it inconsistent with deliberation.[5]

Such being the measure of responsibility, there are with respect to the rule no degrees of insanity; insanity which brings its victim within the exception to the rule of responsibility, entitles him to an acquittal; mental unsoundness which does not so afflict the sufferer as to deprive him of the capacity indicated,

People *v.* Hettick, 126 Cal., 425; 58 Pac. R., 918.

But insanity is a proper and legitimate defence when the act is the direct result of the insanity. State *v.* Miller, 7 Ohio N. P., 458; 5 Ohio S. & C. P. Dec., 703; and it is error to charge that the defence of insanity is viewed with disfavor. State *v.* Barry (N. D.), 92 N. W. R., 809.

Function of Court.—It is the province of the court to define to the jury what in law constitutes such insanity as amounts to a defence; in acting within this province it should avoid such an argumentative statement as to prejudice the jury. People *v.* Holmes (Mich.), 69 N. W. R., 501.

[1] McFarland's Trial, 8 Abb. Pr. N. S., 57; Revoir *v.* State, 82 Wis., 295; Smith *v.* Com., 93 Ky., 318.

[2] People *v.* Silverman, 181 N. Y., 235, 240: "Whatever may be the opinion of physicians or medical experts on the subject, there is but one test of responsibility known to the law [in New York State]: that found in section 21 of the Penal Code, which is but a statutory declaration of the law, as it had long prevailed."

[3] But *cf.* Commonwealth *v.* Barner, 199 Pa. St., 335; 49 Atl. R., 60.

[4] State *v.* Wade, 161 Mo., 441; 61 S. W. Rep., 800.

[5] People *v.* Wood, 126 N. Y., 249.

does not excuse him or lower the grade of the crime.[1] With respect to this rule, if the accused has the requisite mental capacity, he is guilty of the crime charged and is punished accordingly; if he lacks the mental capacity, he is not guilty. The only apparent exception is in those cases where a specific intent is an element of the crime, or where the law reduces the grade of the crime in case the accused is incapable of entertaining a specific intent.

Some of the decisions, showing different methods of stating the proposition, are here collated.

A man is not criminally responsible for an act when, by reason of involuntary insanity or delusion, he is at the time incapable of perceiving that the act is either wrong or unlawful.[2] To establish the defence of insanity in a criminal case, it must be shown that the insanity was such as to destroy, for the time at least, the consciousness of the distinction between right and wrong in reference to the act charged.[3] There must, to raise the defence of insanity, be a defect of reason from disease of the mind, so that the person did not know the nature and quality of the act he committed, or did not know whether it was right or wrong.[4]

Where the defendant was capable of understanding the nature of the act at the time of its commission, but incapable of distinguishing whether right or wrong, then he is not responsible. The two tests are in the alternative.[5] But, it is said, the ability to distinguish right and wrong must be wholly destroyed.[6]

Where a person *at the time of the commission*[7] *of an alleged crime* has sufficient mental capacity to understand the nature and quality of the acts constituting the crime, and the mental capacity to know whether they are morally or legally right or wrong, he is generally responsible if he commits such acts, whatever

[1] Commonwealth *v.* Hollinger (Pa. O. & T.), 2 Dauph. Co. Rep., 13.

[2] People *v.* Pine, 2 Barb., 566; People *v.* Sprague, 2 Park. Cr., 43.

[3] People *v.* Montgomery, 13 Abb. Pr. N. S., 207, citing 4 Den., 9; People *v.* O'Connell, 62 How. Pr., 436; abstr. s. c., 13 N. Y. Weekly Dig., 95, affirmed in *id.*, 536.

[4] Regina *v.* Burton, 3 F. & F., 772, citing McNaghten's case, 10 Clark & F., 200; 1 Car. & K., 130; Knights *v.* State (Neb.), 78 N. W. Rep., 508; 58 Neb., 225.

[5] Commonwealth *v.* Hollinger (Pa. O. & T.), 2 Dauph. Co. Rep., 13.

[6] Commonwealth *v.* Barner, 199 Pa. St., 335; 49 Atl. R., 60.

[7] See People *v.* Burgle, 55 Pac. R., 998; 123 Cal., 303.

may be his capacity in other particulars; but if he does not possess this degree of capacity, then he is not so responsible.[1]

If the accused knows that the act is wrong, mere insane belief that it is justifiable is no exense.[2]

A conviction of murder may be had if the accused at the time of the killing had sufficient power of mind to distinguish between the right and wrong of the act, although he suffered from mental aberration as to other matters.[3]

While it is true that discrimination between right and wrong is not required in general, but only in regard to the act in question, it is on the other hand not sufficient for the defence in a given case to rely simply on a general state of unsoundness of mind. The mere fact that a person is insane does not relieve him from criminal responsibility. The insanity must have been such as to prevent the accused from distinguishing between right and wrong in the particular act.[4]

Temporary or Sudden Insanity.—The law does not reject such a mental condition as a defence merely because it is transitory or temporary,[5] or sudden.[6]

Higher Test in Pennsylvania and Illinois.—In Pennsylvania, in a homicide case, it was said that not only must the ability to distinguish right and wrong be totally destroyed, but the insanity must amount to delusion controlling the will, and make the commission of the act an overwhelming necessity. This decision fixes a higher standard of responsibility, requiring the concurrence of more elements of mental impairment than

[1] Flanagan *v.* People, 52 N. Y., 467; 11 Am. R., 731; Kearney *v.* State, 68 Miss., 233; 8 So., 292; State *v.* O'Neil, 51 Kan., 651; 33 Pac., 287; Bolling *v.* State, 54 Ark., 588; 16 S. W., 658; Hornish *v.* People, 142 Ill., 620; 18 L. R. A., 237; 32 N. E., 677; State *v.* McIntosh, 40 S. C., 349; 17 S. E., 446; State *v.* Davis, 109 N. C., 780; 14 S. E., 55; Revoir *v.* State, 82 Wis., 295; 52 N. W., 84; Smith *v.* Com., 93 Ky., 318; 17 S. W., 868; Com. *v.* Gerade, 145 Pa. St., 289; 22 Atl., 464; People *v.* Clendennin, 91 Cal., 35; 27 Pac., 418; State *v.* Schafer, 116 Mo., 96; 22 S. W., 447; State *v.* Zorn, 22 Ore., 591; 30 Pac., 317; Lovegrove *v.* State, 31 Tex. Cr. R., 491; State *v.* Branton, (Or.), 56 Pac. R., 267; State *v.* Cole (Del.), 2 Penne., 344; 45 Atl. R., 391; Maas *v.* Territory, 10 Okl., 714; 63 Pac. R., 960.

[2] Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. R., 542; 43 W. N. C., 506. *Cf.*, however, Delusions, *infra*, p. 462.

[3] State *v.* Maier, 36 W. Va., 757; 15 S. E., 991.

[4] Johnson *v.* State, 45 S. W. Rep., 436; 100 Tenn., 254; People *v.* Beverly (Mich.), 66 N. W. R., 379; Mackin *v.* State, 59 N. J. Law, 495; 36 Atl. Rep., 1040.

[5] People *v.* Ford (Cal.), 70 Pac. R., 1075.

[6] Massengale *v.* State (Tex.), 6 S. W. R., 35.

any other case cited.[1] A similar combination of the two tests has been adopted in Illinois.[1]

General Rules in Cases of Fixed or Complete Insanity.—Having referred to the leading cases, it now remains for us to point out the following general rules as to irresponsibility in cases of fixed or complete insanity.

Mental States of Absolute Irresponsibility.—These states are called complete idiocy, general mania, general, permanent, and fixed insanity. The first attempt to point out precisely three conditions of insanity in which the civil and criminal responsibilities are unequally affected was made by Lord Hale. He divided insanity into partial insanity as to certain subjects, partial as to degree, and total insanity. The latter, he held, excused crime, partial insanity did not.[2]

1. Complete idiocy creates exemption from crime and criminal responsibility under all circumstances. For "an idiot is a person without understanding, and who is legally presumed never likely to have any";[3] and where there is no reasoning power at all there cannot be capacity for responsible discrimination in any particular case. Therefore idiots—in the proper meaning of this term—have always been considered at law incapable of crime.

2. A similar conclusion may be drawn as to general or fixed insanity. A person cannot be lawfully punished for an act which was committed by him while in such a state of insanity.[4]

The causes producing unsoundness of mind are irrelevant to the question of irresponsibility. Whenever general or fixed insanity is proved, the cause by which it has been produced in a given case is wholly irrelevant as to the question of irresponsibility. This rule goes so far that "where a person is insane at the time he commits the crime he is not punishable, although such insanity be remotely occasioned by undue indulgence in spirituous liquors, or from what, in a moral sense, is a criminal neglect of duty."[5]

[1] Commonwealth *v.* Barner, 199 Pa. St., 335; 49 Atl. R., 60; *cf.* Hopps *v.* People, 31 Ill., 385; 83 Am. Dec., 231; Lilly *v.* People, 148 Ill., 467.

[2] Pleas of the Crown, 30.

[3] *Supra*, p 351.

[4] People *v.* McElvaine, 125 N. Y., 600; 36 N. Y. St. Rep., 181; People *v.* Coleman, 1 N. Y. Cr. R., 2; Autremont *v.* Fire Assn., 48 N. Y. St. Rep., 43; 65 Hun, 477; 20 N. Y. Supp., 345. But see as to the meaning of "insanity" in this connection *supra*, p. 350.

[5] "Am. and Eng. Ency. of Law," 1st ed., vol. iv., p. 694.

States of Mental Insufficiency or Abnormality Consistent with Criminal Responsibility.—*General Views.*—Leaving these last-mentioned states of palpable irresponsibility as indicated by complete idiocy or fixed and complete mania, we may conclude that each case, to be one of irresponsibility, must contain in itself the following elements: (1) The mental defect—insufficiency or abnormality—of the individual who committed the act in question must appertain, at the time of its commission, to the proper categories of idiocy, imbecility, lunacy, or insanity; and (2) it must, at the same time, causatively refer to the act itself—that is, be such as to deprive him of the capacity of knowing either its nature and quality or that it was wrong and unlawful. These elements are strictly indispensable; for, "no person shall be excused from punishment unless he be expressly defined and exempted by the law itself."[1] The inference from this is that irresponsibility as recognized by law is limited so that not every kind and degree, be it even morbid, of mental infirmity or abnormality, whether congenital or acquired, permanent or temporary, renders the individual irresponsible in a given case, even though it (1) influences actually and seriously his judgment in regard to right and wrong, or (2) affects his power of will.[2]

Weak-Mindedness.—If one is of sound mind he is responsible for his criminal act, even though his mental capacity be weak or his intellect of inferior order; the law recognizes no exemption from crime less than some degree of insanity or mental unsoundness.[3]

[1] "Am. and Eng. Ency. of Law," 1st ed., vol. iv., p. 693.

[2] Under the New York Penal Code (§§ 17, 21), partial or incipient insanity is not a defence, if there is still ability to form a correct perception of the legal quality of the act and to know that it is wrong; and if the specific act is contemplated and the accused has the power to know whether it is wrong to do it, the law presumes that he has the power to choose the right, and will not permit court or jury to speculate as to its possible non-existence. People *v.* Taylor, 34 N. E. Rep., 275; 138 N. Y., 398. See *infra*, p. 446, "Partial Insanity"; *infra*, p. 448, "Moral Insanity"; *infra*, p. 457, "Morbid Propensity."

[3] Where the accused was a man, the fact that his intelligence was no greater than that of a boy thirteen or fourteen years of age does not show that he was an imbecile. Rodgers *v.* State (Tex. Cr. App.), 28 S. W. Rep., 948. Where the accused was eighteen years old, had about as much discretion as a child of thirteen, chose the company of children, and could not remember, if given more than one task at a time, *held* that this justified no more favorable instruction than that if the jury should find accused of weak mind, they should consider that fact in determining the degree of his guilt and the measure of his punishment. Mangrum *v.* Commonwealth, 39 S. W. Rep., 703; 19 Ky. Law R.,

Weakness of mind, falling short of incapacity to distinguish the nature of the act, or else between right and wrong, with respect to the particular act, is insufficient to justify a verdict of insanity of a person under indictment.[1] But where the mental weakness is of such character as to deprive the accused of the power to judge between right and wrong he is not responsible.[2] The jury must be satisfied that the prisoner's mind is in such a state of unsoundness or disease as to exempt him from responsibility; and not merely that it is so infirm as to render him incapable of managing his own affairs.[3]

The law requires something more than occasional oddity or hypochondria to exempt the perpetrator of an offence from punishment.[4] The theory that eccentricities of character and inordinate passion can render a sane man incapable of committing any offence which involves deliberation is wholly untenable.[5] Where the acts of the accused were such as to satisfy the jury that the killing was the result of premeditation and deliberation, his bad temper and eccentricities of character, not amounting to insanity, cannot detract from the effect of his acts or shield him from responsibility therefor.[6]

Neither melancholia nor uncontrollable passion excuses the prisoner, if notwithstanding such state of mind, he had sufficient comprehension of the nature of the act in which he was engaged to understand whether it was right or wrong.[7]

A desire for self-destruction, and the adoption of means to secure it, do not of themselves indicate a mental impairment, which has advanced to the stage of irresponsibility.[8]

An irritable temper and an excitable disposition of mind do not constitute insanity; a person possessing such mental peculiarities

94. *Cf.* Taylor *v.* Com., 90 Va., 109; 19 S. E. R., 739.

[1] State *v.* Tyler, 7 Ohio N. P., 443; 5 Ohio S. & C. P. Dec., 588; State *v.* Palmer, 161 Mo., 152; 61 S. W. Rep., 651; Commonwealth *v.* Lutz, 10 Kulp (Pa.), 234; Nelson *v.* State (Tex. Cr. App.), 67 S. W. R., 320.

[2] Hays *v.* Commonwealth (Ky.), 33 S. W. Rep., 1104; 17 Ky. Law R., 1147.

[3] People *v.* Kleim, 1 Edm. (N. Y.), 13.

[4] Hawe *v.* State, 11 Neb., 537; 38 Am. Rep., 375; Anderson *v.* State, 43 Conn., 514; 21 Am. Rep., 669; People *v.* Silverman, 181 N. Y., 235; Reg. *v.* Burton (Eng.), 3 F. & F., 772.

[5] Sindram *v.* People, 1 N. Y. Crim. Rep., 448, affirmed 88 N. Y., 196.

[6] *Ibid. Cf.* People *v.* Leary, 105 Cal., 486; 39 Pac. R., 24.

[7] Cole's Trial, 7 Abb. Pr. N. S., 321. Compare People *v.* Montgomery, 13 Abb. Pr. N. S., 207 (N. Y.).

[8] People *v.* Taylor, 138 N. Y., 408: see 1 N. Y. St. Repr., 648; People *v.* Carpenter, 102 N. Y., 250; 4 N. Y. Cr. R., 187; People *v.* Haight, 3 *id.*, 61; 13 Abb. N. C., 198; People *v.* Rhinelander, 2 N. Y. Cr. R., 340.

is more predisposed to an attack of insanity than men in general, but is not on that account actually insane; such peculiarities are not of themselves evidences of insanity; and the greater liability of such a person to give way to passion cannot be considered in determining his responsibility, if he is capable of distinguishing the right or wrong of his act.[1] If the prisoner, when he killed the deceased, was in such a state of mind as to know that the deed was unlawful and morally wrong, he was responsible, and otherwise he was not.[2]

Belief in spirits in itself is no defence, provided the accused knew and realized that the act was wrong.[3]

Temporary Excitement or Passion.—The heat of passion or feeling produced by anger, hatred, jealousy, or revenge is not insanity. The law holds the doer of the act under such conditions responsible for the crime.[4]

Jealousy.—In People *v.* Foy[5] the defendant murdered Henrietta Wilson in one of the streets of Saratoga on the 13th of May, 1892. He had known her for some time. A short time before the murder, he had said to her in a conversation in Saratoga that he intended to go away. She remonstrated, saying, as long as she had a dollar he could have it, but he replied that she had ruined him, that he was broke and she was throwing him out, that she had another mash, and that he was going away. He then went to New York, where he pawned his overcoat to get a pistol, returned soon after and shot her. He said that he had had the intent to kill himself also. On the trial temporary insanity was pleaded as a defence. It was proved that he was laboring under the passion of jealousy and was very angry with the woman. The trial court, on being requested to charge the jury that insanity produced by anger or jealousy, if it incapacitated the subject from knowing right from wrong, would be a defence, instructed the jury that "if there is such a thing as

[1] State *v.* Brooks, 57 Pac. R., 1038; 23 Mont., 146; People *v.* Leary, 105 Cal., 486; 39 Pac. R., 24.

[2] Willis *v.* People, 32 N. Y., 715, affirming 5 Park. Cr., 621. Compare Cole's Trial, 7 Abb. Pr. N. S., 321; Flanagan *v.* People, *supra*.

[3] People *v.* Waltz, 50 How. Pr., 214. See *supra*, p. 399, for effect of belief in spirits on competency in respect to competency of a testator to make a will.

[4] People *v.* Foy, 138 N. Y., 664; 53 N. Y. St. Repr., 265; 34 N. E. Rep., 396; People *v.* Nolan, 7 N. Y. Cr. R., 134.

[5] 138 N. Y., 664. Though it may reduce the degree, for instance from murder in the first, to murder in the second degree. State *v.* Gosnell, 74 Fed. Rep., 734.

genuine insanity produced by jealousy, or revenge, or wrath—I do not mean turbulence of passion produced by a desire for revenge—but if there is any genuine insanity produced by any cause, then so far as affecting the prisoner, it is the same as any other kind of insanity. The heat of passion and feeling produced by motives of anger, hatred, or revenge is not insanity. The law holds the doer of the act under such conditions responsible for the crime." The prisoner was convicted of murder in the first degree and sentenced to death. On appeal the charge was held proper and the judgment was affirmed.

In People *v.* Nolan[1] the defendant was indicted for murder in the first degree. He had been living with a prostitute who supported him to a certain extent. One day she refused to do so any longer. A short time before the crime he found another man in her room, went away, purchased a pistol, returned to the house, called her to come down stairs, and, when she came, shot her five times, from which she died. He fled, and, when subsequently arrested, stated that he had shot the deceased because "she had shook" him; he was angry and did not know what he did. The defence was insanity. On the trial it appeared that when a small boy he fell from a banister and hit his head, remaining unconscious a couple of hours; that shortly after his mother's death, he then being twelve years of age, he woke up in the night and told his brother that he had seen his mother; and this occurred somewhat frequently since, especially two weeks before the shooting; that when he was seventeen years old he was overcome by the heat; whether he became unconscious or not could not be remembered by his brother, who gave these statements as witness, but he remembered that defendant was then sick about a week. The defendant, at the time of the trial, was about twenty-three years of age, and had been a hard drinker. Defendant was convicted of murder in the first degree. On appeal it was held that the evidence in chief was sufficient to justify the verdict, and that the evidence above quoted was entirely insufficient to prove insanity, and the judgment was affirmed.[2]

Frenzy, induced by violent passion, unless settled down into a state of total derangement, will not excuse the commission of an offence.[3] Uncontrollable frenzy does not excuse, unless it be

[1] 7 N. Y. Cr. R., 134.
[2] 115 N. Y., 660.
[3] Pienovi's Case, 3 City H. Rec. (N. Y.), 123. But it may reduce the

that of madness or mental alienation.[1] Passion and malice do not show insanity.[2]

Adultery will not justify a homicide, though it is a provocation of the gravest character. Whether it is murder or manslaughter for a husband to kill his wife, when taken in the act of adultery, depends on whether the act was done with intent to kill or in the heat of passion engendered by the sudden discovery, and without intent to kill.[3] The overwhelming conviction of domestic dishonor, although not such as to prevent him from discriminating between right and wrong, may nevertheless deprive the slayer's act of premeditation and thus reduce the crime to manslaughter.[4]

In People *v.* Osmond[5] the defendant was indicted for the murder of his wife. The defence was insanity. His wife had entertained for a long time improper relations with one Burchell. After defendant discovered these relations, he failed for months to make even an attempt to punish Burchell or his wife, but continued his intimate and daily association with both, although constantly complaining of this discovery. The rooms where he lived were a part of the house occupied and owned by Burchell. The defendant, his wife, and Burchell went together on excursions, and Burchell paid the expenses with defendant's acquiescence. One day he shot and killed his wife and Burchell, who was with her. Defendant testified that he remembered with distinctness all that took place at the interview in which the killing occurred up to the moment when he saw Burchell "nudge his wife's knee," but that from that time during several hours and at intervals his mind was a blank, except that he heard a shot before Burchell struck him, and that the pistol went off toward the corner where the latter was shot. Defendant's father, stepmother, and brother testified that he was some-

degree of the crime, for instance from murder in the first to murder in the second degree. State *v.* Gosnell, 74 Fed. Rep., 734.

[1] Cole's Trial, 7 Abb. Pr. N. S. (N. Y.), 321.

[2] Deas *v.* Wandell, 3 Supm. Ct. (T. and C.), 128 (N. Y.).

[3] Shufflin *v.* People, 62 N. Y., 229; 20 Am. R., 483, affirming 4 Hun, 16; 6 Supm. Ct. (T. and C.), 215. See also 3 Hun, 515; 5 Supm. Ct. (T. and C.), 572.

[4] Cole's Trial, 7 Abb. Pr. N. S., 321. But it is not any previous conduct of the deceased which will have this effect, at least where the wife is the victim; it is only when she is taken in adultery or immediately afterward that the passion will reduce the degree of the crime. State *v.* Callaway, 154 Mo., 91; 55 S. W. Rep., 444. See Attaway *v.* State (Tex. Cr. App.), 55 S. W. Rep., 45.

[5] 138 N. Y., 80.

what nervous, irritable, and excited over the behavior of his wife.

The defence set up was the insanity of the defendant at the very moment of the killing, or, if not insane, that his mind was then in such a weak condition as to have been overcome, and that he was incapable of forming an intent to commit murder, and therefore his crime, if anything, was a lesser offence.

The district attorney asked a medical witness called by him whether there was any form of insanity known to the medical profession where the mind temporarily comes and goes, leaving in the middle a blank. The question was objected to and admitted on the ground that it was a hypothetical question. The answer was given in the negative. The defendant was convicted of murder in the first degree.

On appeal the judgment was affirmed. Judge Peckham, writing the opinion for the court, stated that here was no such case as a husband suddenly confronted with proofs of his wife's infidelity, but a full and clear knowledge of it for months before the killing and an intimate and daily association with both the guilty parties.

The court also held that when the defence is temporary insanity, or, if not insane, that defendant's mind was so weak that he was incapable of forming an intent to commit murder, evidence on cross-examination of defendant's brother as to whether he would regard defendant's actions as irrational if he were nervous or irritable after divorce papers had been served on him, was proper though unimportant; and also that evidence of acts of infidelity on the part of the wife were not admissible to show the state of defendant's mind unless such acts were known to him.

Intermediate Steps Between Sanity and Insanity.—Judge Cox, in charging the jury in the celebrated trial of Guiteau for murdering President Garfield, said that there is a debatable border-line between the sane and the insane, and there is often great difficulty in determining on which side of it a party is to be placed. It is in these cases that the difficulty arises of determining whether the patient has passed the line of moral or legal accountability for his actions.[1]

Illustrative Cases.—Some cases on this point may here be given.

[1] 10 Fed. Rep., 161.

The Court of Appeals of New York has held that incipient insanity is not a sufficient excuse from criminal liability under the New York Penal Code, section 21, if the accused has still the ability to form a correct perception of the legal quality of his act and to know that it is wrong.[1]

In an interesting case one Brush was indicted upon the charge of attempted murder. On the trial, evidence was given that he imagined that some waiters in a restaurant in New York City, which he frequented, had drugged his food. He therefore complained to the proprietor, who remonstrated, and he then became violent and aggressive. On being removed by force from the premises he drew a pistol and attempted to shoot those about him. Examined by the physicians of the Tombs, he was pronounced insane and sent to the State Homœopathic Asylum for the Insane. After a detention of a few weeks he petitioned for his release on the ground of recovery of sanity. The Commissioners of Lunacy, by Hon. John Ordronaux, expressed the opinion that his case belonged to the borderland of insanity, that his condition showed physical paradoxes which indicated weakness and instability of the brain. He had led a roving life, exhibiting unsteadiness of purpose. An uncle and an aunt were insane. He was oscillating between insanity and imperfect soundness; any disturbance of health might cause him to cross the boundary. Nevertheless, in a quiet, disciplined mode of life, he would undoubtedly possess the legal competency necessary for the exercise of all his civil rights. The petitioner had been not, properly speaking, so much insane, as laboring under a chronic irritation of brain which led him to irrepressible violence when excited, because of the existing state of mental weakness which such a brain always produces. No other symptoms had exhibited themselves in the asylum and his natural condition had been restored there. The commissioners recommended that he should be further observed during a few weeks, and then dismissed. He was accordingly later discharged, 1877.[2]

It has been held in Connecticut that a person may be responsible, although he is mentally incapable "of a careful weighing of reasons in order to reach a decision."[3]

[1] People *v.* Taylor, 138 N. Y., 398; 52 N. Y. St. R., 914.

[2] Case of Rodman A. Brush, 3 Abb. N. C., 225.

[3] State *v.* Swift, 57 Conn., 496; 18 Atl. Rep., 664.

And it was held in Illinois that evidence that defendant, indicted for shooting his wife, was in trouble with his family and was disturbed in mind and perhaps somewhat excited, is not sufficient to raise a reasonable doubt as to his sanity.[1]

In Missouri, a man was accused of the murder of his wife; evidence that his wife had left him, and he then acted strangely for several weeks, talked disconnectedly, refused to eat, and became moody and melancholy, was insufficient to establish insanity.[1]

Epilepsy and Kindred Diseases.—It has frequently been held that epilepsy alone does not establish insanity which will excuse from crime.[2] But evidence of epilepsy may be such as to estab-

[1] Montag *v.* People, 141 Ill., 75; and *cf.* State *v.* Clark, 47 S. W. Rep., 886; 147 Mo., 20.

[2] Lovegrove *v.* State, 31 Tex. Crim. Rep., 491; 21 S. W. Rep., 191. Compare Walsh *v.* People, 88 N. Y., 458; Hall *v.* Com. (Pa.), 12 Atl. Rep., 163; Fogarty *v.* State, 80 Ga., 450; 5 S. E. Rep., 782; Com. *v.* Buccieri, 153 Pa. St., 535; 32 W. N. C., 113; 26 Atl. Rep., 228; State *v.* Alexander, 30 S. C., 74. The following case, though not establishing any legal principle with respect to epilepsy as a defence, is an illustration of the attempted defence of epileptic insanity. In Commonwealth *v.* Buccieri (153 Pa. St., 535; 26 Atl. Rep., 228) the defendant was indicted upon a charge of murder. The defence was epileptic insanity. He had been injured by an explosion and taken to a hospital. He asked there a fellow-patient to lend him his knife, and requested him to open it as his left hand was disabled. About this time a sister of charity who had been nursing him came in with a glass of milk which she left by his bedside and went out again. Defendant got up, followed her into an adjoining room, and stabbed her. She attempted to escape and ran into the sick-ward. He pursued her and stabbed her again, causing her death. The patient who lent him the knife raised a chair to strike him; then he stopped and gave the knife back.

It was proved that defendant was an epileptic, and it was pointed out that the tendency of the disease was to weaken the intellect. The evidence, however, did not show that his intellect had been impaired or that he had been affected on the day of the murder. He had had one attack of epilepsy at the hospital five weeks before. A witness who knew the prisoner intimately for five years had only on two occasions seen him act irrationally and had never seen him have an epileptic attack. No motive for the crime was shown except that two or three days before the occurrence defendant had stated he did not like the sister.

Defendant having offered evidence that he was subject to epileptic fits, from which he frequently fell and lay in a stupor, and that on recovery his mind was disordered, it was held proper for the Commonwealth to call witnesses who lived near and saw him often, to prove that they never saw him have an epileptic attack, but often saw him drunk and in a drunken stupor, and that it was for the jury to determine whether or not the alleged symptoms of epileptic insanity were only drunken prostration. The court further held that the general charge was not unfair to defendant, when his defence, insanity, as well as the alleged cause of it, epilepsy, were prominently brought to the attention of the jury, though it was assumed that the evidence did not show a motive for the crime; but the jury were told that in considering the other evidence of insanity they might consider the enormity of

lish irresponsibility for crime on the recognized theory of inability to know the quality of the act, or whether it was right or wrong, if the evidence shows that defendant was unconscious from epilepsy and acted automatically, without design, purpose, or memory.[1]

Partial Insanity and Paranoia.—"There are cases in which a man's mental faculties generally seem to be in full vigor, but on some one subject he seems to be deranged. He is possessed perhaps, with a belief which every one recognizes as absurd which he has reasoned himself into, and cannot be reasoned out of, which we call an insane delusion; or he has, in addition, some morbid propensity, seemingly in harsh discord with the rest of his intellectual and moral nature. This class of cases, for want of a better term, is called 'partial insanity.'"[2]

By the earlier English law, such insanity was not a defence to criminal prosecution.

The following extract is from Dr. Ray's "Medical Jurisprudence":

"Until quite recently, the course of practice in the English criminal courts has been in strict conformity to the doctrines laid down by Lord Hale, that partial insanity is no excuse for the commission of illegal acts. For instance, in the trial of Arnold, in 1723, for shooting at Lord Onslow, Mr. Justice Tracey observed 'that it is not every kind of a frantic humor, or something uncontrollable in a man's actions, that points him out to be such a madman as is exempted from punishment; it must be a man that

the crime and the absence of motive, and this, though the trial court charged that the enormity of the crime was of itself not evidence of insanity.

The defence being epileptic insanity, a combination of physical and mental infirmities, and defendant having been on the stand to testify to his own insanity, the court said it was proper, in referring to the evidence on this question, to direct the jury to consider the appearance and conduct of defendant along with the other evidence. The conviction was affirmed. See also Commonwealth *v.* Hillman, 189 Pa. St., 548; 42 Atl. Rep. 196; 43 W. N. C., 356; 29 Pitts. L. J., 268; People *v.* Barber, 115 N. Y., 475; 26 N. Y. St. R., 184 (judgment reversed for refusal to charge "if no motive had been established for the crime it should be regarded as important on the question of epilepsy").

[1] People *v.* Barberi, 47 N. Y. Supp., 168; 2 N. Y. Crim. R., 89.

[2] Judge Cox in Guiteau's case, 10 Fed. Rep., 161. See *supra,* article: Insanity, vol. III., p. 262, title "Paranoia," for the medical conception of partial insanity. Where the court properly states the rules respecting criminal responsibility of persons of impaired mental capacity, it is not necessary that it should use the term paranoia, or delusional insanity. Muider *v.* State, 113 Ga., 772; 39 S. E. Rep., 284.

is totally deprived of his understanding and memory, and doth not know what he is doing, no more than an infant, than a brute or a wild beast, such a one is never the object of punishment.' "[1]

Dr. Ray then proceeds: "It appears, then, that the law at that time did not consider an insane person irresponsible for crime in whom there remained the slightest vestige of rationality, though it did then, and has ever since, deprived him of the management of himself and his affairs, and vitiates his civil acts even when they have no relation to the delusions that spring from his madness. That the progress of science and general enlightenment has produced no improvement of the law on this subject is abundantly shown in the strong declarations of Sir Vicary Gibbs, when Attorney-General of England, in the trial of Bollingham, in 1812. 'A man,' says he, 'may be deranged in his mind; his intellect may be insufficient for enabling him to conduct the common affairs of life, such as disposing of his property, or judging of the claims which his respective relations have upon him; and if he be so, the administration of the country will take his affairs into their management, and appoint to him trustees; but, at the same time, such a man is not discharged from responsibility for criminal acts' (Collinson on Lunacy, 657). Lord Erskine had previously given the same doctrine the sanction of his authority, in his celebrated speech in defence of Hatfield. 'I am bound,' he says, 'to admit that there is a wide distinction between civil and criminal cases. If, in the former, a man appears upon the evidence to be *non compos mentis,* the law avoids his act, though it cannot be traced or connected with the morbid imagination which constitutes his disease, and which may be extremely partial in its influence upon his conduct; but to deliver a man from responsibility for crime, above all for crimes of great atrocity and wickedness, I am by no means prepared to apply this rule, however well established where property only is concerned.' "[2]

Some of the more recent authorities on this subject holding that partial insanity or paranoia is not *necessarily* sufficient to exempt a person from criminal responsibility are: People *v.*

[1] 8 Hargrave's State Trials, sec. 322, quoted in Ray's "Med. Jur.," v. i., p. 14

[2] Ray, "Med. Jur.," vol. i., p. 16.

Taylor,[1] State *v.* Schaefer,[2] State *v.* Harrison,[3] State *v.* Maier,[4] and Riley *v.* State.[5]

MORAL INSANITY AND IRRESISTIBLE IMPULSE.

Certain forms of partial insanity are also sometimes denominated "moral insanity."[6] There are, however, diverse understandings of the meaning of the term "moral insanity," and by some it has been used to describe a degenerate moral state without any mental disease.[7]

The plea of moral insanity, in the phases of alleged "irresistible impulse" to commit crime; "emotional insanity"; decadence of will power, depriving the defendant of the ability to refrain from crime; so-called kleptomania, etc., has had an interesting history in the law of insanity. By the prevailing American rule, the accused may be responsible even though some controlling mental disease was, in truth, the acting power within him; even though passion, which he had not through disease sufficient will power to control, prompted the act. He is responsible provided he knew the quality of the act and was able to distinguish between right and wrong with respect to it.[8]

Although some courts have expressed doubts, alienists agree that veritable cases of insanity have existed where some mental

[1] 138 N. Y., 398; 52 N. Y. St. R., 919.

[2] 116 Mo., 96; 22 S. W. R., 447.

[3] 36 W. Va., 729; 18 L. R. A., 224; 15 S. E. R., 982.

[4] 36 W. Va., 757; 15 S. E. Rep., 991; it was held that it was no error to charge that if the jury believed that the accused did the act as charged in the indictment and had sufficient power to distinguish between the right and wrong of such act, the verdict ought to be guilty, though they believed he suffered from mental aberration as to other matters.

[5] 44 S. W. R., 498 (Texas), *held*, that a person partially insane is not exempt from the consequences of his act, if, at the time of its commission, he knew it to be wrong and criminal and could apply that knowledge to his own case.

[6] See medical view of *Moral Insanity*, vol. III., p. 243, title "Moral Insanity." See N. Y. Penal Code, sec. 20; Flanagan *v.* People, 52 N. Y.,467; 11 Am. Rep., 731. Compare 13 Alb. L. J., 210, 225; 63 Alb. L. J., 429, 459; People *v.* Wood, 126 N. Y., 269; 36 N. Y. St. R., 963.

[7] In New Jersey *emotional insanity* was ironically defined as depending "upon the mere emotions of the time arising from some defective or perverted moral sense, which begins on the eve of the crime and ends when it is finished." Genz *v.* State, 34 Atl. Rep., 816; 58 N. J. Law, 482.

"The doctrine of moral insanity *consisting of irresistible impulse coexistent with mental sanity* has no support in psychology or law." State *v.* Lyons, 113 La., 959; 37 So. R., 890. *Cf.* Cawley *v.* State (Ala.), 32 So. R., 327.

[8] People *v.* Carpenter, 102 N. Y., 250; 1 N. Y. St. R., 648; 4 N. Y. Cr. R., 178; People *v.* Walworth, 4 *id.*, 395; Willis *v.* People, 32 N. Y., 717; State *v.* Knight, 95 Me., 467; 50 Atl. R., 276; 55 L. R. A., 373; and cases cited in the last note and *infra*.

disease or lesion destroyed the will, subjecting it to the whim of every flaming passion,[1] without also destroying the rational power of discriminating between right and wrong.

The learned but dogmatic Baron Rolfe said, in the English case of Regina *v.* Allunt,[2] where, on the trial of an indictment for poisoning, the defendant was alleged to have acted under some moral influence which he could not resist, that "every crime was committed under an influence of such a description; and the object of the law was to compel people to control these influences." Yet there would seem to be a distinction between an emotional impulse which a person *cannot* control, perhaps by reason of a brain lesion, and one which he does not control because he is a criminal.

Without doubt the main reason which has impelled the courts and legislatures to adhere to the common-law rule in McNaghten's case,[3] that ability to distinguish between the right and wrong of it is substantially the only test of responsibility for a criminal act, and to refuse to adopt the inability to *choose* between right and wrong as an additional test, is the protection of the public. "Emotional insanity" and "irresistible impulse" would offer a dangerous facility of escape from just punishment and salutary separation from society, to the depraved and vicious. For the margin between disease of the brain causing such propensity to unlawful acts, and mere depravity, moral turpitude, or criminality, is slender. More than now even, and more justly, the criticism of the administration of criminal justice would be made that almost any homicidal degenerate who is rich enough to hire experts can raise a reasonable doubt of his sanity and escape punishment. It will be long before in every court the defendant who, knowing that what he did was wrong, nevertheless did the act because he had so weak and diseased a will that he could not resist the impulse, will be held any less a criminal than he is a menace to society.

Able courts which, in the light of the most recent studies of learned alienists, have decided for the first time or re-examined

[1] "A helpless puppet in the hands of Briarean passions," Robertson, J., in Smith *v.* Com., 1 Duv. (Ky.), 224. *Cf.* Professor Fisher's article on Insanity, *supra*, p. 273.

[2] Erroneously cited in Flanagan *v.* People, 52 N. Y., 467, as Rogers *v.* Allunt. Quoted also in People *v.* Waltz, 50 How. Pr. (N. Y.), 204.

[3] 10 Clark & F., 200; 1 Car. & K., 130.

this question, adhere to the traditional view. In a Maine case the trial judge was asked to instruct the jury that the right-and-wrong test has proved to be insufficient and unsatisfactory. The defendant sought to rely upon a plea of uncontrollable insane impulse. The court refused the instruction asked. On appeal the Supreme Court declared that the test of responsibility consisting of capacity to understand the nature and quality of the act and distinguish between the right and wrong of it is the only proper legal criterion, and when fully explained to the jury in its application to special facts and circumstances will always be found adequate to meet the demands of justice and humanity to the accused as well as to insure the protection and safety of the public.[1]

IMPULSIVE INSANITY OR INSANE IRRESISTIBLE IMPULSE.

States Rejecting the Theory.

Following the rules announced by Tindal, C. J., and Maule, J., in McNaghten's case,[2] the courts of California,[3] Kansas,[4] Maine,[5] Maryland,[6] Michigan,[7] Minnesota,[8] Mississippi,[9] Missouri,[10] Nebraska,[11] Nevada,[12] New Jersey,[13] New York,[14] Oklahoma,[15] Oregon,[16] South Carolina,[17] South Dakota,[18] Tennessee,[19] Texas,[20]

[1] State *v.* Knight, 95 Me., 467; 50 Atl. R., 276; 55 L. R. A., 373; Maas *v.* Territory, 10 Okl., 714; 63 Pac. R., 960; 53 L. R. A., 814. See also cases cited *infra*, p. 455, and an able and exhaustive argument for the irresistible-impulse test by Professor W. H. Parry in 63 Alb. Law Jour., 429, 459.

[2] 10 Clark & F., 200; 1 Car. & K., 130; applied in Reg. *v.* Haynes, 1 Fost. & F., 666.

[3] People *v.* Hubert, 119 Cal., 216; 51 Pac. R., 329; People *v.* Trebileox, 86 Pac. R., 684.

[4] State *v.* Mowry, 15 Pae. R., 282.

[5] State *v.* Knight, 95 Me., 467; 50 Atl. R., 276; 55 L. R. A., 373.

[6] Spencer *v.* State, 69 Md., 28.

[7] People *v.* Finley, 38 Mich., 482.

[8] Minn. Penal Code, secs. 19, 20; State *v.* Seott, 41 Minn., 365; 43 N. W. R., 62.

[9] Cunningham *v.* State, 56 Miss., 269; 31 Am. R., 360.

[10] State *v.* Soper, 148 Mo., 217 49 S. W. R., 1007.

[11] Hawe *v.* State, 11 Neb., 537; 38; Am. R., 375.

[12] State *v.* Lewis, 20 Nev., 333.

[13] Genz *v.* State, 59 N. J. Law, 488; 37 Atl. R., 69.

[14] Flanagan *v.* People, 52 N. Y., 467; 11 Am. R., 731.

[15] Maas *v.* Ty., 10 Okl.,714; 63 Pae. R., 960; 53 L. R. A., 814; Turner *v.* Ty., 82 Pae. R., 650.

[16] People *v.* Owens, 56 Pae. R., 251.

[17] State *v.* Levelle, 34 S. C., 126; 13 S. E. R., 319.

[18] State *v.* Leehman, 2 S. D., 171; 49 N. W. R., 3.

[19] Wilcox *v.* State, 94 Tenn., 106; 28 S. W. R., 312.

[20] Carter *v.* State, 12 Tex. 500; 62 Am. Dec., 539; but otherwise as to

and West Virginia[1] have explicitly rejected insane irresistible impulse as a defence.

In some of these courts doubt was expressed whether there was any such thing as insane irresistible impulse. Others admit the possibility, but conclude that to apply it as a test of capacity to commit crime would be too dangerous and difficult, and that in any event an impulse sufficiently strong to render the insane person governed by it irresponsible must generally be characterized by an inability to distinguish as well as choose between right and wrong.[2] In Pennsylvania and Illinois, decisions *appear* to require that in order to be irresponsible a lunatic must be subject to *both* irresistible impulse and inability to distinguish between right and wrong.[3] In Florida the statute provides that the common law of England shall be in force, and probably the irresistible-influence doctrine is rejected.[4]

Illustrative Cases Rejecting the Theory.—In the New York case of Flanagan *v.* People[5] the defendant was convicted of murder in the first degree for killing his wife. The defence was insanity. In the Court of Appeals, Judge Andrews, in delivering the opinion of the court affirming the conviction, said: "We are asked in this case to introduce a new element into the rule of criminal responsibility in cases of alleged insanity, and to hold that the power of *choosing right from wrong* is as essential to legal responsibility as the capacity of *distinguishing between* them; and that the absence of the former is consistent with the presence of the latter. The argument proceeds upon the theory that there is a form of insanity in which the faculties are so disordered and deranged that a man, though he perceives the moral quality of his acts, is unable to control them, and is urged by some mysterious pressure to the commission of acts the consequences of which he anticipates but cannot avoid. Whatever medical or scientific authority there

"kleptomania," Harris *v.* State, 18 Tex. App., 287.

[1] State *v.* Harrison, 36 W. Va., 729; 15 S. E. R., 982; 18 L. R. A., 224. See valuable note appended to this case in 18 L. R. A.

[2] Brannon, J., in State *v.* Harrison, 36 W. Va., 729, quoted *infra*, p. 453. *Cf.* Com. *v.* Rogers, 7 Metc. (Mass.), 500; Bovard *v.* State, 30 Miss., 600; Brown *v.* Com., 78 Pa. St., 122.

[3] Commonwealth *v.* Barner, 199 Pa. St., 335, *supra*, p. 437; *cf.* Com. *v.* Hillman, 189 Pa. St., 548; 42 Atl. R., 196; 43 W. N. C., 356; 29 Pitts. L. J., 268; Hopps *v.* People, 31 Ill., 385; 83 Am. Dec., 231; Lilly *v.* People, 148 Ill., 467.

[4] *Cf.* Davis *v.* State, 32 So. R., 822. See also U. S. *v.* Faulkner, 35 Fed. R., 730.

[5] See note 1, p. 452.

may be for this view, it has not been accepted by courts of law."[1]

In People *v.* Walworth,[2] the defendant was indicted for the killing of his father, the well-known novelist Mansfield Tracy Walworth. The latter had been estranged from the defendant, as well as all his family, for a series of years. He had shown a bad and violent conduct toward them, and, living separated from his family, used to write outrageous letters and to utter violent threats to them. In the last week of May, 1873, the defendant was invited by his uncle to accompany him to Europe. On the 31st of the same month he learned by a letter written to his mother by the deceased that the latter interposed an obstacle to the visit to Europe then contemplated by him. He then decided to see his father personally, for the purpose of removing the obstacle and at the same time to relieve, if possible, himself and his mother from the danger which he feared from his father, especially as to her safety during his absence. On Monday, the 3d of June, 1873, he went from Saratoga, where he lived with his mother, to New York. Here he had an interview with his father at the Sturtevant House, being then alone with him in a room, and, when he felt the result not a satisfactory one, killed him, firing four shots at him. After the deed he told the hotel clerk that he had killed his father by four shots, and asked him to send for the police. Then he dictated to the officer who arrested him a telegram to his uncle: "I have shot father. Look after mother."

The defendant asserted on the trial that he had had no intention of killing the deceased. At the hotel, he said, he requested his father to promise that he would neither shoot his mother, nor insult her or any of the family any further. The father answered, "I promise," but with a look which implied contempt and the reverse of intent to keep the promise, after having just put

[1] 52 N. Y., 467; People *v.* Walworth, 4 N. Y. Cr. Rep., 355; People *v.* Coleman, 1 N. Y. Cr. R., 1; People *v.* Waltz, 50 How. Pr., 214; People *v.* Carpenter, 1 N. Y. St. R., 648; 102 N. Y., 250; 4 N. Y. Cr. R., 187; Willis *v.* People, 32 N. Y., 715; People *v.* Otto, 38 Hun, 99; 4 N. Y. Cr. R., 154; Moett *v.* People, 85 N. Y., 379; People *v.* Casey, 31 Hun, 158; reversed on other grounds in 96 N. Y., 115; People *v.* Taylor, 138 N. Y., 398.

[2] 4 N. Y. Cr. Rep., 355. The jury found the defendant guilty of murder in the second degree, and he was sentenced to imprisonment in the State prison at hard labor for the term of his natural life. His sentence was after several years' imprisonment commuted by the governor, and he was discharged.

his hand up to his breast as if to pull out a pistol. Then the defendant fired. He said he remembered only that he fired three times. The question of insanity was raised by the claim that he acted under an uncontrollable impulse, and especially by pointing out that he did not recollect the number of his shots. The charge delivered by Justice Davis to the jury contained the following: "If it be satisfactorily shown that the accused at the time of committing the act had not the capacity to understand what he was doing, and to know the consequences of his act, and to know that it was wrong, then he is excused. But if he had capacity sufficient to know the legal and moral character of the act he was doing, the fact that he alleges that he had not the control of his will in respect to it, but that his will was controlled by irresistible impulse, is no defence." [1]

In Maryland, in Spencer *v.* State,[2] Spencer was indicted for the crime of murder. The defence was emotional insanity. Deceased had assaulted the prisoner's wife before her marriage. After her death the defendant called upon him, induced him to take a walk with him, accused him then of the assault, and shot him. Evidence was offered on behalf of the defence to show that the prisoner's wife attributed her illness to the assault; that her dead body with scars inflicted by the deceased would appear to the prisoner in his dreams; that he was haunted with the idea that he would have no peace of mind until he had killed her assailant, the deceased; and that since the killing he had found rest and quiet. The court refused to admit this evidence, and the prisoner was found guilty and sentenced. On appeal it was held no error to exclude such evidence without other proof of insanity, and the judgment was sustained.

In Thomas *v.* State [3] it was held that though defendant, apparently without motive and without provocation, shot deceased while the latter was disputing with a third person, the fact that he was subject to temporary, uncontrollable impulses to injure any one in front of him is not available as a defence, his condition at the time not being shown.

In State *v.* Harrison [4] the defendant was indicted for murder. The defence was insanity, viz., irresistible impulse. He was a homeless wanderer, and was taken in by a family to do odd jobs.

[1] See note 2, p. 452.
[2] 69 Md., 469.
[3] 71 Miss., 345.
[4] 36 W. Va., 729.

He fell in love with his employer's daughter, a child of the age of fifteen. She refused to have anything to do with him, and he became very jealous of her other male acquaintances. He secretly procured a pistol, went to a shop and purchased cartridges and laudanum, and then returned to the house of his employer and shot the girl. He was subsequently found in the woods suffering from the effects of laudanum. On being questioned he claimed that he did not know why he did the act. Convicted and sentenced, he appealed. On the appeal, Justice Brannon, in sustaining the conviction, expressed the following opinion: "This irresistible-impulse theory test has been only recently presented, and while it is supported by plausible arguments, it is rather refined, and introduces what seems to me a useless element of distinction for a test, and is misleading to juries, and fraught with great danger to human life, so much so that even its advocates have warningly said it should be very cautiously applied and only in the clearest cases. What is this irresistible impulse? How shall we of the courts and juries know it? Does it exist when manifested in one single instance, as in the present case, or must it be shown to be habitual, or at least to have evinced itself in more than a single instance? . . . I admit the existence of irresistible impulse and its efficacy to exonerate from responsibility, but not as consistent with an adequate realization of the wrong of the act. It is that uncontrollable impulse produced by the disease of the mind, when that disease is sufficient to override judgment and obliterate the sense of right as to the acts done, and deprives the accused of power to choose between them."

In South Carolina,[1] on a trial for murder where the defence was irresistible impulse, it was shown that the defendant suffered from St. Vitus's dance (chronic chorea), which affected his physical condition; how far it affected his mind the witnesses were not agreed. The defence requested the court to charge the jury that, if by reason of mental derangement the prisoner had not power to control the disposition or impulse to commit the deed, he should be acquitted. The court refusing to do so, charged that mere *mental weakness was not sufficient to exempt* one from responsibility; that it required insanity, and insanity to the extent of destroying a knowledge of the moral and legal wrongfulness of the act, to have that effect. The prisoner was

[1] State *v.* Alexander, 30 S. C., 74.

found guilty, and on appeal the charge was approved and the judgment was affirmed.

States Accepting the Theory.

Insane irresistible impulse, notwithstanding capacity to distinguish between right and wrong, has been accepted as a defence in Alabama,[1] Arkansas,[2] Delaware,[3] Georgia,[4] Indiana,[5] Iowa,[6] Kentucky,[7] New Hampshire,[8] Ohio,[9] Virginia,[10] and Wisconsin.[11] In Vermont[12] and Montana[13] the theory has been intimated, but not actually so held.[14]

Illustrative Cases Accepting the Irresistible-Impulse Test.—In the leading cases adopting as an innovation the irresistible-impulse theory, attempts have been made to reconstruct the law of criminal insanity in accordance with the new test. Thus, in Alabama, the court said:[15] "We think that the inquiries to be submitted to the jury, in every criminal trial where the defence of insanity is interposed, are these:

"First: Was the defendant, at the time of the alleged crime, as a matter of fact, afflicted with a disease of the mind, so as to be either idiotic or otherwise insane?

"Second: If such be the case, did he know right from wrong, as applied to the particular act in question? If he did not have such knowledge, he is not legally responsible.

[1] Parsons *v.* State, 81 Ala., 577; 60 Am. R., 193.

[2] Green *v.* State, 64 Ark., 523; 43 S. W. R., 973.

[3] State *v.* Jack, 58 Atl. R., 833.

[4] Flanagan *v.* State, 103 Ga., 619; 30 S. E. R., 550; where exercise of the will necessary to formation of specific intent essential.

[5] Plake *v.* State, 121 Ind., 433; 23 N. E. R., 273; 16 Am. St. R., 408.

[6] State *v.* Felter, 25 Iowa, 67.

[7] Farris *v.* Com., 1 S. W. R., 729; Shannahan *v.* Com., 8 Bush (Ky.), 463; 8 Am. R., 465.

[8] State *v.* Pike, 49 N. H., 399; 6 Am. R., 533, professing to reject *every* so-called test of criminal capacity, but really accepting the irresistible-impulse theory; exhibiting more common-sense than scientific knowledge.

[9] Blackburn *v.* State, 23 Ohio St., 146.

[10] Dejarnette *v.* Com.,75 Va., 867.

[11] Butler *v.* State, 102 Wis., 364; 78 N. W. R., 590.

[12] State *v.* Kelley, 32 Atl. R., 434.

[13] State *v.* Peel, 23 Mont., 358; 59 Pac. R., 169.

[14] In England (Lord Denman in Reg. *v* Oxford, 9 Car. & P., 525) and New York (People *v.* Kleim, 1 Edm., 13, 26), this rule at one time gained some authority. In Germany and Austria, the "free-will" test of criminal responsibility has complete acceptance in the codes; "Deutsches Strafgesetzbuch," § 51 (translated): "It is not a punishable act, when the doer at the time of the commission of the act was in a condition of unconsciousness or diseased derangement of mind, through which the free exercise of his will was precluded." *Cf.* "Oesterreichisches Strafgesetzbuch," § 2; Casper-Liman, "Handb. der ger. Med.," 9th ed., vol. 3, pp. 2, 3, 7–11.

[15] Parsons *v.* State, 81 Ala., 577; 60 Am. R., 193.

"Third: If he did have such knowledge, he may nevertheless not be legally responsible if the two following conditions concur: (1) If, by reason of the duress of such mental disease, he had so far lost the power to choose between the right and the wrong, and to avoid doing the act in question, as that his free agency was at the time destroyed; (2) and if, at the same time, the alleged crime was so connected with such mental disease, in the relation of cause and effect, as to have been the product or offspring of it solely."

In Indiana, the court said:[1] "Though accused had sufficient mental capacity to know right and wrong and to comprehend the nature and consequence of his acts, he is not criminally responsible, if in consequence of the diseased state of his mind he lacked the will power to resist an impulse to commit crime."

And in Georgia, the rule has been formulated as follows: "If a man has reason sufficient to distinguish between right and wrong in relation to a particular act about to be committed, he is criminally responsible. An exception to this rule is, where a man has reason sufficient to distinguish between right and wrong as to a particular act about to be committed, yet, in consequence of some delusion, his will is overmastered, and there is no criminal intent; provided, that the act itself is connected with the peculiar delusion under which the prisoner is laboring."[2]

Limitations of this Defence.—In jurisdictions where insane irresistible impulse is a defence, it of course becomes necessary to determine whether morbid propensity to crime rises to the point of insanity. And the courts have been led to declare frequently that the defence must be guarded by clear and strict instructions to the jury, warning them of its uncertainties and narrow limits.[3]

Kleptomania, Pyromania, etc.—Most or all of the decisions cited above have been in homicide cases. When kleptomania has been alleged, the courts have sometimes failed to recognize it as a mere variant of the irresistible-impulse doctrine.

In a Pennsylvania case it was held that the court will not

[1] Plake *v.* State, 121 Ind., 433; 23 N. E. R., 273; 16 Am. St. R., 408.

[2] Taylor *v.* State, 105 Ga., 746; Adams *v.* State, 123 Ga., 500.

[3] Parsons *v.* State, 81 Ala., 567; 60 Am. R., 193; Cawley *v.* State (Ala.), 32 So. R., 227; Bolling *v.* State, 54 Ark., 588; Choice *v.* State, 31 Ga., 424, 473; Guetig *v.* State, 66 Ind., 94; 32 Am. R., 99; State *v.* Mewherter, 46 Iowa, 88; State *v.* Lyons, 113 La., 959; 37 So. R., 870.

disturb a verdict, rejecting the defence of kleptomania in a trial for lareeny, as eontrary to the weight of evidence, unless the defenee is overwhelmingly sustained by the quantity and quality of the evidenee.[1] By implieation, this decision reeognizes kleptomania as a defenee. And in Texas, where the irresistible-impulse doetrine has been elearly repudiated,[2] kleptomania, defined as "an uneontrollable propensity to steal," has been allowed as a defenee.[3]

MORBID, UNCONTROLLABLE PROPENSITY TO CRIME.

The defenee of partial insanity has often been based upon an asserted ehronie propensity to eommit erime, or a partieular elass of eriminal aets. As we have stated, the rule is that moral insanity, so ealled, as distinguished from mental derangement, ean never be a defenee to a eriminal proseeution. Beeause a person is degraded, erotie, bestial, degenerate, ungovernably passionate, a eriminal, in short, he must not therefore be unpunished for his erimes.[4] Physiologists have insisted that such degeneraey usually involved a mental disease or abnormality. But as Chief Justiee Gibson of Pennsylvania remarked,[5] "There may be an unseen ligament pressing on the mind, drawing it to eonsequenees whieh it sees, but cannot avoid, and plaeing it under eoereion, whieh, while its results are elearly pereeived, is ineapable of resistanee. The doetrine whieh aeknowledges this mania is dangerous in its relations, and ean be reeognized only in the clearest cases."

Illustrative Cases.—In Walker *v.* People[6] Walker was indieted for the erime of abduetion of Katie Hennessy. The defenee was insanity. The defendant had entieed the girl, aged about eight years, from the street in front of her parents' house in New York, and had taken her to the upper part of the eity. The attention of a passer-by having been attraeted to Walker and the girl, he questioned the ehild, who said the man was not her father, that he was taking her away, and that she wanted to go home. Walker was then arrested. Katie Hennessy testified

[1] Com. *v.* Fritsch (Pa. O. and T.), 9 Pa. Co. Ct. R., 164.

[2] Leache *v.* State, 22 Tex. Cr. App., 279; 58 Am. R., 638; Carter *v.* State, 12 Tex., 500; 62 Am. Dec., 539.

[3] Harris *v.* State, 18 Tex. Cr. App., 287; Looney *v.* State, 10 Tex. Cr. App., 520; 38 Am. R., 646.

[4] People *v.* Foy, 138 N. Y., 664.

[5] Com. *v.* Mosler, 4 Pa. St., 264.

[6] 26 Hun, 67; 1 N. Y. Cr. R., 7.

that while she and the prisoner were together on the street railroad, he had put his hands under her clothes. The prison physicians Hardy and Jackson testified that they believed from examinations of, and conversations with, the prisoner, that he was insane; that he did not recognize the gravity of his offence, was afraid of the people in the prison, was wandering and disconnected in his conversation, was subject to delusions as to an imaginary conspiracy of chemists against him, on account of valuable discoveries he had made; that his manner was nervous and uneasy, and that he was suffering from chronic mania. Dr. Spitzka, as witness, declared that the prisoner was perfectly sane and was shamming insanity. Defendant had been previously sentenced for rape to a term of ten years in the State prison at Trenton, N. J., where it was thought he feigned insanity; and had also been confined in the New York City prison on a charge of assault on a young woman.

In the abduction case, the prisoner was convicted and sentenced to the State prison for the term of ten years. On appeal to the New York General Term, Justice Davis expressed the following opinion: "Where the defence of insanity is interposed to an indictment, the true test of criminal responsibility is whether the accused had sufficient reason to know right from wrong. If he had sufficient intelligence to know it, whether he had sufficient power to control or govern his actions is a matter of no moment whatever."

In the Court of Appeals, the opinion of Justice Davis was approved and the judgment of conviction was again affirmed.[1]

In United States *v.* Faulkner[2] the defendant was indicted for mailing obscene matter. Insanity was interposed as a defence, and it was claimed that by reason of masturbation he had become mentally irresponsible. The court charged the jury to the effect that the unsoundness, to relieve from crime, must refer positively to the offence charged and deprive the accused of the capacity of discerning that the act committed was wrong.

In England, Christina Edmunds, aged forty-three, was charged with the wilful murder of a little boy named Barker. The boy ate some chocolate-creams, which were bought at a respectable confectioner's shop; half an hour after, he died with the symptoms of poisoning with strychnine. The presence of the alkaloid was subsequently detected in the contents of his stomach. It was proved that the prisoner had obtained a considerable amount of strychnine under false pretences, had got possession of the drug-

[1] 88 N. Y., 81. [2] 35 Fed. Rep., 730.

gist's poison-book, and had torn out leaves which recorded the purchase. It appeared that she incorporated part of the poison with some chocolate-creams, and then asked a small boy to purchase some more creams for her; when he brought them she said they were too large, and sent them back to be changed. Unknown to the boy she substituted poison creams, which when returned to the confectioner, were placed with his ordinary stock *to be sold in due course.* One or more of these poisoned sweets caused the death of the boy Barker, who was totally unknown to the prisoner. She also distributed poisoned sweets to many children who became ill. At the inquest, which was held on the body of the deceased (before being suspected of the crime), she voluntcered evidence in order to implicate the confectioner who had sold the sweets; she also wrote anonymous letters to the father of the deceased, inciting him to take legal proceedings against the confectioner. This was not done through malice toward the man, but to divert suspicion from herself. She had previously been accused of endeavoring to poison a lady, for whose husband she had conceived a regard, and the whole of this elaborately carried out public poisoning was apparently the result of a scheme to make it evident that the lady's indisposition was also due to poisoned sweets, owing to carelessness of the confectioner. It was proved in evidence that the prisoner's father on two occasions had been under restraint and that he died in an asylum; that one brother had epilepsy and died in Earlswood Asylum; that a sister was hysterical and had tried to throw herself out of a window, and that other members of the family had suffered from various psychoses. Expert physicians were called to prove that the prisoner was morally insane: she was without intellectual defect and was free from delusions, but she was indifferent to her position and to the enormity of her crime. She was found guilty and was sentenced to death, but the sentence was subsequently changed to detention in Broadmoor Asylum (Regina *v.* Edmunds, C. C. C. 1872, quoted in J. Dixon Mann, "Forensic Medicine," etc., Philadelphia, 1893.)

Another case quoted in Mann's "Forensic Medicine," is the following: A man, who in his youth was sullen, uncommunicative, idle, sly, and treacherous, at an early age evinced a disposition to torture domestic animals and to treat cruelly younger members of the family. On one occasion he took a younger brother into the fields, undressed him, beat him with long lithe willows, and bit and scratched him about the arms and upper part of the body, threatening to kill him with a table knife if he cried out. Shortly after he was apprehended for cutting the throat of a horse belonging to a neighbor, and confessed that he had maimed several other animals, and had twisted the necks of fowls and then concealed them in wood piles; he was sentenced to twelve months' imprisonment. On his discharge from prison he attempted to suffocate a little child by piling clothing, etc., on the top of it; he then stole some money from his father's desk, for which act he was sentenced to seven years in a penitentiary. After his liberation, being again at home, he saw his father accidentally cut his hand so that it bled profusely; this seemed to excite him, and he went to a neighboring farm-yard and cut the throat of a horse, killing it. He escaped, and, whilst hiding in a wood, saw a young girl, seized her and committed a criminal assault on her. After being about ten years in prison for this offence he was set free, and on his way home from prison he caught a horse, tied it to a telegraph pole and mutilated it in a shocking manner, cutting a terrible gash in the neck, another in the abdomen, and taking a piece off the end of its tongue. For this he was tried and acquitted on the ground of insanity, and was transferred to an asylum. After being there for five years he made his escape, and was only absent from the asylum about an hour when he overtook and attempted to outrage a young girl almost in sight of the pursuing attendants. Besides all this he was guilty of innumerable acts of cruelty to fellow-patients in the asylum, and also to dogs, cats, fowls, etc. He was a great coward and was never known to attack any person that would be likely to offer resistance. The sight of blood had a strange effect on this man; his face grew pallid, he become nervous and restless, and,

unless watched, lost control over himself and indulged in the proclivities for which he was notorious. If so situated that he could not indulge his evil propensities he was quiet and a useful man; he had had a fair education and enjoyed reading the newspapers and letters sent to him. (Haek Tuke, *Journal of Mental Science*, 1886; J. Dixon Mann, "Forensic Medicine," Phila., 1893.)

Effect of Moral Insanity on Degree of Crime.—The crime of murder requires a specific intent to kill. Where degrees of murder have been established, murder in the first degree requires premeditation. Insanity not destroying the capacity to distinguish between right and wrong may nevertheless lower the crime of homicide from murder to manslaughter[1] or affect the degree[2] by proving the accused deprived of the capacity to premeditate murder, or form an intent to kill.[3]

Melancholia and Mania.—The general principle above stated and illustrated was that partial insanity, as such, will not afford a legal excuse for crime unless the intellect of the accused is at the same time deprived of the knowledge of right and wrong in regard to the act in question. This principle applies equally to all varieties of incomplete insanity, and thus shows how far mania and melancholia are considered at law as causes of irresponsibility. In other words, their existence is *generally* by itself without any importance as to the question of guilt or innocence.

With Respect to Melancholia, we may be allowed instead of further explanation to refer to the most significant case of People v. Taylor.[4] The defendant was convicted and sentenced, because he knew that his deed was contrary to social or legal commands. In the face of this fact, his being melancholic could not save him from the ordinary consequences which the law applies to the crime of murder. Besides being melancholic, he was subject to impulses manifesting themselves in morbid tendencies, to both homicide and suicide. When he killed his fellow-prisoner, he adopted this way of action as a certain though indirect way of getting rid of his own life. Yet the fact that his melancholia resulted in such powerful impulses could not add any strength to the arguments of the defence, as we have just seen.[5] Besides we may refer to the English case of Burton, where melancholia was also presented with unquestionable distinctness.[6] In this case

[1] State *v.* Potts, 100 N. C., 457; 6 S. E. R., 657.

[2] Andersen *v.* State, 43 Conn., 514; 21 Am. R., 669.

[3] *Cf.* Intoxication, *infra*, p. 488.

[4] People *v.* Taylor, 138 N. Y., 398.

[5] *Supra*, p. 444.

[6] Regina *v.* Burton, 3 F. and F., 772; see *infra*, p. 463.

the defendant also chose murder as the means of causing his own death, which he had not the personal courage to accomplish himself.

The case of Reidell in Delaware is interesting on account of the conviction found by the jury, although the court was seemingly inclined to appreciate more fully the plea of melancholia made by the prisoner and testified to by the medical experts. One Reidell was indicted for the murder of his wife. The defence of insanity was sustained by expert opinion as melancholia. The court charged to the effect that the jury should acquit if they believed the testimony as to the harmonious relations existing previously between the prisoner and his wife, together with the testimony of experts that the prisoner had at the time of the homicide the disease of melancholia that impaired his will power and rendered him likely at any time to commit such an act as he was charged with. The fact that he exhibited no remorse, but rather calm satisfaction following its commission, raised a reasonable doubt of the prisoner's sanity, which the testimony of witnesses as to his appearance and conduct did not remove. The jury, however, found him guilty.[1]

In regard to mania the law requires, as before stated, that the same rule be applied as to melancholia: that to be excused from crime the accused must be unconscious of the wrongfulness of his act. The question of mania often arises in the courts in connection with temporary insanity, either as a single and isolated phenomenon or in the form of recurrent insanity. Again, in such cases, mania frequently presents the type of irresistible impulse. In this regard we have nothing further to note in addition to former statements of the law, except that it will easily be understood that transitory mania generally meets with no favorable consideration on the part of the courts. For it presents special difficulties even to medical science, and the danger of the abuse of such a plea is obvious. Of course, speaking of transitory mania, we do so in its proper sense,[2] leaving apart those cases where any doubt could exist as to whether the abnormal state of mind might not be rather an excessive heat of passion or anger. Thus limited, such mania, as a defence, when

[1] State *v.* Reidell, 9 Del., 470; 14 Atl. Rep., 550.

[2] See on "Mania Transitoria" the article on "Medical Aspects of Insanity," vol. III., p. 261, of this work.

occurring as a solitary phenomenon, will be much more difficult to establish in our courts than when a series of previous maniacal attacks can be shown. Yet it is a fact that transitory mania is acknowledged in principle as a full excuse for crime, though this has not always been the case. The practical difficulties of proof in a concrete case often paralyze the practical value of that principle. On the other hand, the existence of such a form of insanity was looked upon with great suspicion in the case of People *v.* Osmond.[1]

Delusional Insanity.—We have seen that partial insanity constitutes an excuse from criminal responsibility only when it obliterates the capacity to discriminate between right and wrong. The same rule applies to delusions. Delusions occur in all forms of insanity, general as well as partial. They are, as matter of fact, mere symptoms of the illness itself, but they are in a medical sense not essential elements of unsoundness. "Yet it is a fact," says a recent medical writer, "that delusional insanity appeals more cogently to the legal mind than other varieties. Lawyers attach much importance to the presence of delusions as a sign of insanity, and admit that they may be so dominant as to disturb the judgment to a degree inconsistent with sane conduct."[2]

"The test of responsibility where insanity is asserted, is the capacity to distinguish between right and wrong with respect to the act, and the absence of insane delusions respecting the same."[3]

The existence of delusions in any single case, whenever proved, strengthens the evidence of insanity otherwise established, and alone it often affords in trials the possibility of sustaining the plea of unsoundness; and while this is so in regard to general as well as partial insanity, its importance is most obvious when the latter comes in question, for we have seen how careful courts generally are in dealing with such a plea.

Insane Delusion Defined.[4]—In considering the part which delusions take in irresponsibility, being aware that many different

[1] People *v.* Osmond, 138 N. Y., 80; 33 N. E. Rep., 739. And see also People *v.* Casey, 2 N. Y. Cr. R., 187.

[2] J. Dixon Mann, "For. Med.," p. 356.

[3] "Am. and Eng. Ency. of Law," 1st ed., vol. iv., p. 696.

[4] See Insane Delusions in Relation to Contracts, *supra*, p. 357; in regard to wills, *supra*, p. 394, where also the legal concept of what constitutes an insane delusion is discussed, at some length.

meanings of this term are used in common life and in different branches of science, we have first to define delusions. Using the term "insane delusions" will not avail us essentially. In an English case already referred to, Justice Wightman said: "Delusion means the belief in what did not exist."[1] This statement is apparently not a sufficient definition, as it comprehends only one logical element of the term to be defined.

In the Guiteau case, Judge Cox charged the jury as follows on this subject: "An insane delusion is never the result of reasoning and reflection. It is not generated by them and it cannot be dispelled by them. . . . Whenever convictions are founded on evidence, on comparison of facts and opinions and arguments, they are not insane delusions. The insane delusion does not relate to mere sentiments or theories, or abstract questions of law, politics, or religion. All these are the subject of opinions, which are beliefs founded on reasoning and reflection. These opinions are often absurd in the extreme, and result from naturally weak or ill-trained reasoning powers, hasty conclusions from insufficient data, ignorance of men and things, credulous dispositions, fraudulent imposture, and often from perverted moral sentiments. But still, they are opinions, founded upon some kind of evidence, and liable to be changed by better external evidence or sounder reasoning. But they are not insane delusions."[2]

Citing and approving the last-mentioned opinion, it was said by a Nevada judge that "an insane delusion is an incorrigible belief, not the result of reasoning, in the existence of facts which are either impossible absolutely, or are impossible under the circumstances of the individual."[3] And essentially to the same effect is the following definition: "The delusions which indicate a defect of sanity, such as will relieve a person from criminal responsibility, are delusions of the senses, or such as relate to facts or objects, not mere wrong notions or impressions, or of a moral nature; and the aberration must be mental, not moral, to affect the intellect of the individual."[4]

[1] Regina *v.* Burton, 3 F. and F., 772.

[2] 10 Fed. Rep., 161.

[3] State *v.* Lewis, 20 Nev., 333; 22 Pac. R., 241.

[4] "Am. and Eng. Ency. of Law," 1st ed., vol. iv., p. 695. State *v.* Lewis, 20 Nev., 333; 22 Pac. R., 241; People *v.* Taylor, 34 N. E. Rep., 275; 138 N. Y., 398; 52 N. Y. St. R., 914; Thurman *v.* State, 32 Neb., 224; 49 N. W. R., 338; Bolling *v.* State, 54 Ark., 588; 16 S. W., 658; Smith *v.* State, 55 Ark., 259; 18 S. W., 237.

By adopting this definition, we may reach the conclusion that no other delusions than those thus defined will afford sufficient ground on which a crime may be excused because of the insane delusions of the alleged criminal. Within such limits the law attaches especial importance to delusions, without having much regard to what particular psychosis may have produced them.

But whether an insane delusion exists is a question of fact, and not of law, therefore, a court should not instruct that a certain belief constitutes an insane delusion, but should merely give a correct definition, and leave it to the jury to apply.[1]

The view held by the New York courts under the Penal Code, and by the courts of most of the other States, as well as those of England, as to what is required to create irresponsibility, is that the person in question, idiot, imbecile, lunatic or insane person, be laboring under such a defect of reason as either not to know the nature and quality, or the wrongfulness of the act.[2] Applying this rule to cases of delusions, there is but one conclusion to be reached, which is: That to constitute a legal excuse from crime, the delusion must result from a morbid state of mind, and coincidentally be such as to deprive the person of the knowledge of the nature and quality or wrongfulness of the act. Such are the limits within which the law recognizes delusional insanity.[3]

[1] People *v.* Hubert, 119 Cal., 216; 51 Pac. Rep., 329; Merritt *v.* State, 39 Tex. Cr. App., 70; 45 S. W. Rep., 21.

[2] See *supra*, p. 434.

[3] In Arkansas, on a trial for murder, where the defence was temporary insanity, the defendant asked for the following instruction: "If the jury find from the evidence that the defendant, at the time he fired the fatal shot, was acting under a delusion, although able to distinguish right from wrong, and believed that the deceased and others had formed a plot to take away his life or do him some great bodily injury, and that the deceased had an immediate design to do so, and that it was necessary for him to fire the shot to protect his life or prevent his receiving great bodily injury, they must acquit." There being evidence in the case on which to found such instruction, it was held on appeal that the refusal to give it was error, and that it was not cured by an instruction that "an insane delusion relieves a person from responsibility when, and only when, the facts or state of facts believed in, under the insane delusion, would, if actually existing, have justified the act." Smith *v.* State, 55 Ark., 259; 18 S. W. R., 237.

In Nebraska, on the trial of an indictment for shooting with intent to kill, where the defence was insanity, it was held that an instruction that a delusion must be of such a character that if things were as the defendant imagined them to be they would justify the act springing from the delusion, is not erroneous. Thurman *v.* State, 32 Neb., 224; 49 N. W., 338. The court closed its

The legal consequence of this abstract principle, when it is applied to concrete cases, is that an insane delusion is not a defence unless it would excuse the crime, if the facts about which it exists were true.[1]

Illustrative Cases.—The delusion must have a bearing on the act committed; it must also be of such a character that the person cannot be reasoned out of it. In a Nebraska case the defendant, one Thurman, was indicted for shooting with intent to kill. Insanity was pleaded as a defence. The court charged the jury: "It is not every delusion that can be considered an insane delusion. The delusion must be of such a character that if things were as the delusion pictured them to be, they would justify the act springing from the delusion. To illustrate: If a person be under the insane delusion that he is the Almighty Himself, or is directly commissioned or commanded by the Almighty Himself to shoot a particular person that the Almighty has decided must be shot, and is moved by such delusion alone to do the shooting, that would be an insane delusion, because if true it would justify the shooting. But if a person is under a delusion that a man has done him a mean trick and that he ought to be shot for it, and the delusion moves the person to shoot the man, that is no excuse on the ground of insane delusion; because if the person had really done the man a mean trick, and he had not just imagined it, it would not have justified the shooting. An insane delusion is like a waking dream: the subject can neither be reasoned into nor out of it. It may throw some light on the application of the subject to this case to consider whether a conviction in this case would have a tendency to

instruction by saying: "It may throw some light on the application of the subject to this case to consider whether a conviction in this case would have a tendency to prevent a repetition of such acts."

In another case, in Arkansas, it was held that an instruction that "defendant would not be responsible if he killed deceased under an insane delusion that deceased was trying to marry defendant's mother, and that this delusion caused the killing," was properly refused, as such delusions, if true, would not excuse the act; and also that an instruction asked by the defendant that a delusion would only absolve from guilt where the facts, if real, would excuse it, is incomplete, in that it fails to state what facts would excuse homicide; and it was held that, while the court should have supplied the omission and given the charge, a failure to do so was not reversible error. Bolling *v.* State, 54 Ark., 588; 16 S. W. Rep., 658.

It would seem that the last mentioned legal test refers to partial, rather than to general insanity.

[1] Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. R., 542; 43 W. N. C., 506; McNaghten's case, 10 Clark & F., 200; 1 Car. & K., 130.

prevent a repetition of such acts." The verdict was guilty. On appeal the charge was held correct and the conviction was affirmed.[1]

Where the accused had a delusion that his wife was putting poison in his food, and murdered her, it was held that as he knew the homicide was wrong nevertheless, his conviction should be affirmed.[2] And it has been held that an insane belief that the act was justified is no excuse, when the accused knew nevertheless that it was unlawful; but this last case is close to the border line.[3] Where delusions so took possession of the mind that the defendant labored under the belief that the community and his Creator were against him and his soul was lost, and from these insane notions the act resulted, it was held no crime. The court said that it makes no difference whether the act was the result of general insanity or of an insane delusion regarding some person or subject, if at the time of committing the act, the accused was laboring under the delusion, and the act was the product of the delusion and the accused did not realize that he was committing a crime, though he may have known right from wrong in the abstract.[4]

In Texas, one who killed another, did so under the insane delusion that deceased was leader of a mob that sought the slayer's life, and by killing the leader, accused was preserving his life from the mob; held that he was not criminally liable, as the delusion if true would have rendered the act lawful. The accused was unable by reason of his delusions to know the nature and quality of his act.[5]

Judge Maynard, in delivering an opinion for the New York Court of Appeals affirming a judgment of conviction, said: "Proof on the trial of an indictment for murder that there existed in the mind of the defendant an insane delusion with reference to the conduct and attitude of the deceased will not excuse the homicide, unless the delusion was of such a character that if it had been true it would have rendered the act excusable or justifiable." Accordingly it was held that proof on the trial of

[1] Thurman *v.* State, 32 Neb., 224; 49 N. W. Rep., 338. See also People *v* Ferraro, 161 N. Y., 365; 14 N. Y. Cr. R., 266; 55 N. E. Rep., 931.

[2] People *v.* Hubert, 119 Cal., 216; 51 Pac. R., 329.

[3] Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. R., 542; 43 W. N. C., 506.

[4] State *v.* Miller, 7 Ohio N. P., 458; 5 Ohio S. & C. P. Dec., 703.

[5] Merritt *v.* State, 39 Tex. Cr., 70; 45 S. W. Rep., 21.

such an indictment of the existence of a delusion in the mind of the defendant that the deceased was acting as a spy upon the defendant and had betrayed a plan of escape, did not affect the criminal nature of the act. Under the provision of the Penal Code (section 21) proof of partial or incipient insanity is not sufficient to require an acquittal, if there is still the ability to form a correct perception of the quality of the act, and to know that it was wrong.[1]

The McNaghten Case, Historically a Leading Case on Delusional Insanity.—This delusional test[2] was formally and expressly recognized in the often quoted English McNaghten case. Daniel McNaghten was tried at the Central Criminal Court, London, in March, 1843, for the murder of Mr. Edward Drummond, the private secretary of Sir Robert Peel. The judges sitting were Lord Chief-Justice Tindal, Justices Williams and Coleridge. Sir William Follett, the solicitor-general, represented the prosecution, Mr. Cockburn (afterward Lord Chief-Justice) was leading counsel for the defendant. The evidence established that the premeditated intention of the prisoner had been to shoot Sir Robert Peel. On the 20th of January, 1843, he watched his house with that intention, and seeing Mr. Drummond come out from the house, he followed him and shot him without any previous altercation or provocation, in the mistaken belief that he was shooting Sir Robert Peel.

The defence was insanity. The counsel for the defendant stated expressly that he did not bring forward this as a case of complete, but of partial insanity.

The Lord Chief-Justice, as quoted by Lord Lyndhurst in his speech, summed up the case as follows in his address to the jury:[3] "The point which at last will be submitted to you will be, whether or not on the whole of the evidence you have heard, you are satisfied that at the time the act was committed, for the commission of which the prisoner stands charged, he had not that competent use of his understanding as not to know what he was doing with respect to the act itself—a wicked and a wrong thing; whether he knew it was a wicked or a wrong thing he had done, or that he was sensible at the time he committed this act that it was contrary to the laws of God and man. Undoubtedly

[1] People *v.* Taylor, 138 N. Y., 398; *supra*, p. 460.

[2] *Supra*, p. 462–4.

[3] Hansard, vol. 67, p. 724.

if he was not so sensible, he is not a person so responsible. If upon balancing the evidence in your minds you should think the prisoner capable of distinguishing right from wrong with respect to the act with which he stands charged, he is then a responsible agent, and liable to the penalties imposed upon those who commit the crime of which he is accused."

Clark and Finnelly, Vol. X., page 202, give a report of the summing up, in which in one passage a very material difference occurs. "The question," said Lord Chief-Justice Tindal, in charging the jury, "to be determined is whether at the time the act in question was committed the prisoner had or had not the use of his understanding so as to know that he was doing a wrong or wicked act. If the jurors should be of the opinion that the prisoner was not sensible, at the time he committed it, that he was violating the laws both of God and man, then he would be entitled to a verdict in his favor; but if they are of the opinion that when he committed the act he was in a sound state of mind, then their verdict must be against him." Verdict, not guilty on the ground of insanity.[1]

This verdict and the question of the nature and extent of the unsoundness of mind which would excuse the commission of a felony of this sort having been made the subject of debate in the House of Lords,[2] it was determined to take the opinion of the

[1] Hack Tuke, "Dictionary of Psychological Medicine," Phila., 1892, vol. i., p. 304; C. Clark and W. Finnelly, "Reports of Cases decided in the House of Lords," London, 1845, vol. x., p. 200.

[2] See Hansard's "Debates," vol. 67, pp. 228, 714.

The following are the questions submitted to the judges:

(1) What is the law respecting alleged crimes committed by persons afflicted with insane delusion, in respect of one or more particular subjects or persons; as, for instance, where at the time of the commission of the alleged crime the accused knew he was acting contrary to the law, but did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury or of producing some supposed public benefit?

(2) What are the proper questions to be submitted to the jury, when a person alleged to be afflicted with insane delusion respecting one or more particular subjects or persons, is charged with the commission of a crime (murder, for example), and insanity is set up as a defence?

(3) In what terms ought the question to be left to the jury, as to the prisoner's state of mind at the time when the act was committed?

(4) If a person under an insane delusion as to existing facts commits an offence in consequence thereof, is he thereby excused?

(5) Can a medical man conversant with the disease of insanity, who never saw the prisoner previously to the trial, but who was present during the whole trial and the examination of all the witnesses, be asked his opinion as to the state of the prisoner's mind at the time of the commission of the alleged crime, or his opinion whether the prisoner

judges on the law governing such cases. Several questions were propounded without arguments to the judges; among others the

was conscious at the time of doing the act, that he was acting contrary to law, or whether he was laboring under any and what delusion at the time?

On June 19, the following answers were returned by the judges (with exception of Justice Maule, who stated his opinion separately):

(1) Assuming that your lordships' inquiries are confined to those persons who labor under such partial delusions only, and are not in other respects insane, we are of opinion that, notwithstanding the party accused did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some public benefit, he is nevertheless punishable, according to the nature of the crime committed, if he knew at the time of committing such crime that he was acting contrary to law, by which expression we understand your lordships to mean the law of the land.

(2 and 3) As these two questions appear to us to be more conveniently answered together, we have to submit our opinion to be that the jurors ought to be told, in all cases, that every man is to be presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary be proved to their satisfaction; and that to establish a defence on the ground of insanity it must be clearly proved that at the time of the committing of the act the accused party was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong. The mode of putting the latter part of the question to the jury on these occasions has generally been whether the accused, at the time of doing the act, knew the difference between right and wrong; which mode, though rarely, if ever, leading to any mistake with the jury, is not, we conceive, so accurate when put generally and in the abstract, as when put with reference to the party's knowledge of right and wrong in respect to the very act with which he is charged. If the question were to be put as to the knowledge of the accused solely and exclusively with reference to the law of the land, it might tend to confound the jury by inducing them to believe that an actual knowledge of the law of the land was essential in order to lead to a conviction; whereas the law is administered upon the principle that every one must be taken conclusively to know it, without proof that he does not. If the accused was conscious that the act was one which he ought not to do, and if that act was at the same time contrary to the law of the land, he is punishable; and the usual course, therefore, has been to leave the question to the jury whether the accused had a sufficient degree of reason to know he was doing an act that was wrong; and this course, we think, is correct, accompanied with such observations and explanations as the circumstances of each particular case may require.

(4) The answer must of course depend on the nature of the delusion; but, making the same assumption as we did before—namely, that he labors under such particular delusion only, and is not in other respects insane—we think he must be considered in the same situation as to responsibility as if the facts with respect to which the delusion exists were real. For example, if under the influence of his delusion he supposes another man to be in the act of attempting to take away his life, and he kills that man, as he supposes in self-defence, he would be exempt from punishment. If his delusion was that the deceased had inflicted a serious injury to his character and fortune, and he killed him in revenge for such supposed injury, he would be liable to punishment.

question: "What is the law respecting the alleged crime, when, at the time of the commission of it, the accused knew he was acting contrary to the law, but did the act with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some supposed public benefit?" Mr. Justice Maule and Lord Chief-Justice Tindal answered this question that there was no law that makes persons in the state described in the opinion not responsible for their criminal acts. Lord Chief-Justice Tindal said: "He is, nevertheless, punishable according to the nature of the crime committed, if he knew at the time of committing such crime that he was acting contrary to law."

The Guiteau Case.—The celebrated case of Charles Julius Guiteau, who was tried at Washington, D. C., under an indictment for murder for shooting President Garfield on the 2d of July, 1881, will help to illustrate these principles. The defence was insanity and other points which have no bearing here. The defendant was in his youth a bright boy, enjoyed an ordinary school education, and worked then as clerk in commercial houses

(5) We think the medical man, under the circumstances supposed, cannot in strictness be asked his opinion in the terms stated, because each of those questions involves the determination of the truth of the facts deposed to, which it is for the jury to decide; and the questions are not mere questions upon a matter of science, in which case such evidence is admissible. But where facts are admitted or not disputed, and the question becomes substantially one of science only, it may be convenient to allow the question to be put in that general form, though the same cannot be insisted as a matter of right.

Justice Maule said in his separate answers that he would have been glad if his brethren had joined him in praying to be excused from answering these questions, and he feared that the answers might embarrass the administration of justice when they were cited in criminal trials, and in his answer to the third question he said: "There are no terms which the judge is by law required to use."

We are led to similar conclusions by the following English case. The prisoner, Dodwell, was a clergyman who became involved in legal proceedings, and, after quarrelling with his legal adviser, conducted his own case in such an irregular manner that he did not obtain what he desired. On the strength of this he conceived that he had a grievance against the Master of the Rolls. One morning he awaited the arrival of his Lordship and fired a pistol at him; no injury was inflicted, as the pistol was only loaded with powder and wadding, the prisoner declaring that his sole object was to direct public attention to his wrongs. At the trial the Master of the Rolls stated that the prisoner was incoherent and irritable, and that he appeared to be under a delusion; no medical evidence was called on either side, and the jury returned a verdict of "not guilty on the ground of insanity." (Regina *v.* Dodwell, C. C. C., 1878, as unofficially reported in J. Dixon Mann, "For. Med.," etc., Phila., 1893, p. 357.)

in Freeport, Ill., and Chicago.[1] His real name was Julius Cæsar Guiteau, which he changed because, he said, it reminded him too much of negro names. When twenty years of age he joined the so-called Oneida Community, in Oneida County, N. Y., founded on communistic principles. Entering this community in 1860,

[1] Judge Cox in his admirable charge to the jury in this case said:

"In order to constitute the crime of murder the assassin must have a responsibly sane mind. The technical term, 'sound memory and discretion,' in the old common-law definition of murder, means this. An irresponsibly insane man can no more commit murder than a sane man can do so without killing. His condition of mind cannot be separated from the act. If he is laboring under disease of the mental faculties, if this is a proper expression, to such an extent that he does not know what he is doing or does not know that it is wrong, then he is wanting in that sound memory and discretion which make part of the definition of murder. In the next place, every defendant is presumed innocent until the accusation against him is established by proof. Again, notwithstanding this presumption of innocence, it is equally true that the defendant is presumed to be sane and to have been so at the time when the crime charged against him was committed; that is to say, the Government is not bound as a part of its proofs to show affirmatively that the defendant was sane. As insanity is the exception, and most men are sane, the law presumes the latter condition to be the condition of everybody until some reason is shown to believe the contrary. The burden is, therefore, on the defendant who sets up insanity as an excuse for crime, to bring forward his proofs, in the first instance to show that the presumption is a mistake as far as it relates to him. But after all the evidence is in, if the jury, while bearing in mind both these presumptions and considering the whole evidence in the case, still entertain what is called 'a reasonable doubt on any ground, (either as to the killing or the responsible condition of mind), whether he is guilty of the crime of murder as it has been explained and defined, then the rule is that the defendant is entitled to the benefit of that doubt and to an acquittal.

"As to questions relating to human affairs, a knowledge of which is derived from testimony, it is impossible to have the same kind of certainty which is created by scientific demonstration. The only certainty you can have is a moral one, which depends upon the confidence you have in the integrity of witnesses and their capacity to know the truth. If, for example, facts not improbable are attested by numerous witnesses who are credible, and sustained and uncontradicted, and who had every opportunity of knowing the truth, a reasonable or moral certainty would be inspired by their testimony. In such a case doubt would be unreasonable; and it is not a doubt whether the party may not be possibly innocent in the face of strong proof of his guilt, but a sincere doubt as to whether he has been proved guilty that is called reasonable; and even where the testimony is contradictory, so much more credit may be due to one side or the other that the same result may be produced. On the other hand, the opposing proofs may be so nearly balanced that the jury may justly doubt on which side lies the truth, and in such a case the accused party is entitled to the benefit of the doubt. All that a jury can be expected to do is to be reasonably or morally certain of the fact which they declare by their verdict. As Chief Justice Shaw says, in Com. *v.* Webster, 5 Cush., 320. 'For it is not sufficient to establish a probability, though a strong one arising from the doctrine of chances that the fact charged is more likely to be true than the contrary, but the

he gave to it, according to its rules, his estate ($900), which was left him by his mother. In April, 1865, he withdrew from this

evidence must establish the truth of the fact to a reasonable and a moral certainty—a certainty that convinces and directs the understanding, and satisfies the reason and judgment of those who are bound to act conscientiously upon it.' The defence of insanity has been so abused as to be brought into great discredit. It has been a last resort in cases of unquestionable guilt, and has been the excuse to juries for acquittal when their own and the public sympathy have been with the accused, and especially when the provocation to homicide has excused it according to public sentiment, but not according to law. For these reasons it is viewed with suspicion and disfavor whenever public sentiment is hostile to the accused; nevertheless, if insanity be established to the degree that has been already in part, and will hereafter further be explained, it is a perfect defence to an indictment for murder and must be allowed full weight. Now, it is first to be observed that we are not troubled in this case with any question about what may be called total insanity, such as raving mania or absolute imbecility, in which all exercise of reason is wanting, and there is no recognition of persons or things or their relations; but there is a debatable border-line between the sane and the insane, and there is often great difficulty in determining on which side of it the party is to be placed. There are cases in which a man's mental faculties generally seem to be in full vigor, but on some one subject he seems to be deranged; he is possessed perhaps with a belief which every one recognizes as absurd, which he has not reasoned himself into, and cannot be reasoned out of, which we call an *insane delusion;* or he has in addition some morbid propensity seemingly in harsh discord with the rest of his intellectual and moral nature. These are cases of what, for want of a better term, are called 'partial insanity.' Sometimes its existence, and at other times its limits are doubtful and undefinable, and it is in these cases that the difficulty arises of determining whether the patient has passed the line of moral or legal accountability for his actions. A man does not become irresponsible by the mere fact of being partially insane. Such a man does not take leave of his passions by becoming insane, and he retains as much control over them as in health. He may commit offences too, with which his infirmity has nothing to do; he may be sane as to his crime, understand its nature, and be governed by the same methods in regard to it as other people, while on some other subject having no relation to it whatever he may be subject to some delusion. In a reported case a defendant was convicted of cheating by false pretences, but was not saved from punishment by his insane delusion that he was the lawful son of a well-known prince. The first thing, therefore, to be impressed upon you is, that whenever this partial insanity is relied on as a defence it must appear that the crime charged was the product of the delusion or other morbid condition, and connected with it as cause and effect, and not the result of sane reasoning or natural motives, which the party may be capable of notwithstanding his circumscribed disorder. But assuming that the infirmity of mind has had a direct influence in the direction of the crime, the difficulty is to fix the degree and character of disorder which in such cases will correct irresponsibility in law. The outgivings of the judicial mind on this subject have not always been entirely satisfactory or in harmony with the conclusions of medical science. Courts have in former times undertaken to lay down a law of insanity without reference to, and in ignorance of, the medical aspects of the subject, when it could only properly be dealt with through a concurrent and harmonious treatment by the two sciences of law and medicine. They have, therefore,

order, because, as he said, he did not agree with it in its opinions as to the labor question, although harmonizing otherwise

adopted, and again discarded one theory after another in the effort to find some common ground where the due regard for the security of society and humanity for the afflicted may meet. The mind can only be known by its outward manifestations, and they are found in the language and conduct of the man. For this reason, evidence is admissible to show conduct and language at different times and on different occasions which indicate to the general mind some morbid condition of the intellectual powers, and the more extended the view of the person's life the safer is the judgment formed of him. Everything relating to his physical and mental history is relevant, because any conclusion as to his sanity must often rest upon a large number of facts.

"Evidence as to insanity in the parents and immediate relatives is also pertinent. It is never allowed to infer insanity in a case from the mere fact of its existence in the ancestors, but when testimony is given directly tending to prove insane conduct on the part of the accused, this kind of proof is admissible as corroborative of the other. The reliance of the defence is on the existence of an insane delusion in the prisoner's mind, which so perverted his reason as to incapacitate him from perceiving the difference between right and wrong as to this particular act."

As a part of the history of judicial sentiment on this subject, and by way of illustrating the relation between insane delusions and responsibility, the judge referred to the McNaghten case in England, and the rules laid down by the judges of the Superior Court of England, and stated that these rules, with some qualifications, had been approved in the United States, as in the case of Com. *v.* Rogers, 7 Metc., 500, where Chief Justice Shaw, of Massachusetts, said: "Monomania may operate as an excuse for a criminal act when the delusion is such that the person under its influence has a real and firm belief of some fact, not true in itself, but which if it were true would excuse his act—as when the belief is that the party killed had an immediate design upon his life, and under that belief the insane man kills in supposed self-defence. A common instance is where he believes that the act he is doing is done by the immediate command of God, and he acts under the delusive but sincere belief that what he is doing is by the command of a superior power which supersedes all human laws and the laws of nature."

Judge Cox, in his charge, also explained the term "insane delusion" as follows: "An insane delusion is never the result of reasoning and reflection. It is not generated by them, and it cannot be dispelled by them. Whenever convictions are founded on evidence, on comparison of facts and opinions, and arguments, they are not insane delusions. The insane delusion does not relate to mere sentiments or theories, or abstract questions in law, politics, or religion—all these are the subject of opinions which are beliefs founded on reasoning and reflection. These opinions are often absurd in the extreme, and result from naturally weak or ill-trained reasoning powers —hasty conclusions from insufficient data, ignorance of men and things, credulous disposition, fraudulent imposture, and often from perverted moral sentiments—but still they are opinions founded on some kind of evidence and liable to be changed by other external evidence or sounder reasoning, but they are not insane delusions. The Mormon prophets profess to be inspired and to believe in the duty of plural marriages, although it was forbidden by a law of the United States. One of the sect violated the law and was indicted for it. The judge who tried him instructed the jury as follows: That if the defendant, under the influence of a religious belief that it was right under an inspiration, if he believed that it was right, de-

with its principles and religious theories. The money he received back from the order. He then went to New York to

liberately married a second time, having a first wife living, the want of consciousness of evil intent, the want of understanding that he was committing a crime, did not excuse him. Approved by the Supreme Court of the United States (Reynolds *v.* U. S., 98 U. S., 145). And so in like manner a man may reason himself into a conviction of the expediency and patriotic character of political assassination, but to allow him to find shelter from punishment behind that belief as an insane delusion would be simply monstrous. There is undoubtedly a form of insane delusion consisting of the belief by a person that he is inspired by the Almighty to do something—to kill another, for example—and this delusion may be so strong as to impel him to the commission of a crime. The defendant in this case claims that he labors under such a delusion, an impulse, or 'pressure,' as he called it at the time of the assassination. The prisoner's unsworn declarations since the assassination on this subject, in his own favor, are of course not evidence. A man's language, when sincere, may be evidence of the condition of his mind when it is uttered, but it is not evidence in his favor of the facts declared by him, or as to his previous acts or condition. It is true that the law allows a prisoner to testify in his own behalf, and thereby makes his sworn testimony on the witness-stand legal evidence, to be received and considered by you, but it leaves the weight of that evidence to be determined by you also. Whether it is true or not that insanity is a disease of the physical organ, the brain, it is clearly in one sense a disease when it attacks a man in his maturity. It involves a departure from his normal and natural condition, and this is the reason why the inquiry into the man's previous condition is so pertinent, because it tends to show whether what is called 'an act of insanity' is a natural outgrowth of his disposition, or is utterly at war with it, and therefore indicates an unnatural change. That evidence on this subject is proper was held by the Supreme Judicial Court of New Hampshire in State *v.* Jones, 50 N. H., 369, Judge Ladd.

"From the materials that have been presented to you, two pictures have been drawn by counsel—the one represents a youth of more than the average of mental endowments, surrounded by certain demoralizing influences at a time when his character was being developed; starting in life without resources, but developing a vicious sharpness and cunning, conceiving evidences of great pith and moment that indicated unusual forecast, though beyond his resources; consumed all the while by insatiate vanity and craving for notoriety; violent in temper and selfish in disposition; immoral and dishonest in every direction; leading a life for years of swindling and fraud, and finally, as the culmination of a depraved career, working himself up to the resolution to startle the country with a crime which would secure for him a bad eminence, and perhaps a future reward. The other represents a youth, born, as it were, under malign influences; the child of a diseased mother, and a father subject to religious delusions; deprived of his mother at an early age; reared in retirement and under the influence of fanatical religious views; subsequently this man, filled with fanatical theories, launched upon the world with no guidance save his own impulses, and then evincing an incapacity for any continuous occupation; changing from one pursuit to another—now a lawyer, now a religionist, now a politician—unsuccessful in law; full of widely impracticable schemes for which he had neither resources nor ability; subject to delusions about his abilities and prospects of success, and his relations to others; his mind incoherent and incapable of reasoning on any subject, withal amiable, gentle, and not aggressive, but the victim of surrounding influences; with a

found a religious paper, expecting by it considerable improvement for religion as well as splendid success for himself. After a few months his means being reduced to a small sum, he re-entered the order, but left it again in November, 1866, studied law at Chicago, and was there admitted to the bar. As his first case he brought a lawsuit against the Oneida Community for $9,000 as compensation for the work done by him for the order, asking $1,500 for each year of his membership. By threatening that he would bring to light the "free love" practised by the order, he tried to induce the latter to a compromise; but its chief, Mr. J. H. Noyes, answered by publishing in its official paper that Guiteau had confessed to them to having stolen large sums from his former employers in Freeport and Chicago and to have visited houses of prostitution. On the trial in October 29th, 1881, Mr. Noyes said that he did not remember any action or other symptom on the part of the murderer indicating insanity, but that he had been born with, and possessed during his whole life, a special inclination to evil. The evidence showed that sometimes he practised as a lawyer, defrauding his clients; again he wandered about as a political agitator or religious orator. Very often he let himself be served in hotels as a grand seigneur and then absconded without having paid his bills. In his law practice he used to undertake the collection of doubtful claims under the stipulation of one-half of them as a fee. In one instance the debt being $100, and $40 collected, he retained this sum as payment for himself. For such offences he was repeatedly sentenced and imprisoned in New York and Chicago. At one time when the New York *Herald* published an account of such a case, he sued that paper for $100,000 on the ground of calumny, but afterward withdrew the action. He intended to reform religion and to become an apostle; when he failed therein, he tried to play a political part. So he concluded to buy the *Inter Oecan*, a leading Chicago paper, and worked out, in fact, a very practical plan, which he submitted to a rich politician of Chicago, whom he knew to be ambitious and liberal for political purposes. He asked of him a loan of $200,000, promising to

mind so weak and a temperament so impressible that under the excitement of a political campaign he became frenzied and insanely deluded, and thereby impelled to the commission of a crime, the guilt of which he could not at the moment understand." This case will be found fully reported in 10 Fed. Rep., p. 161.

make him President of the United States by means of this paper, but he failed to convince. In the latter part of the summer and in the fall of 1880, during the Presidential election struggle, he was employed as speaker by the Republican committees, meeting at that time in New York. He had been engaged after he had shown them a speech he had made and had had printed, entitled "Garfield *versus* Hancock," which speech he was afterward permitted to deliver at a meeting. He became then personally acquainted with the chiefs of the Republican party, and being courteously treated by them, he imagined himself to be a very important political personality. He belonged to that class of political workers whose compensation consisted, in case of victory, in the expectation of a public office. The result of the election—James A. Garfield as President, with Vice-President Chester A. Arthur—was claimed by many to be due to a compromise arranged between the two Republican factions existing at that time, the "Half-Breeds" and the "Stalwarts," the President belonging to the former, the Vice-President to the latter. After the election the "Stalwarts," according to the public reports, felt disappointed as to the proportion in which their members were bestowed with public offices. The defendant repeatedly asked of the President and of James G. Blaine, Secretary of State, that he be nominated consul to Vienna or to Paris, ostensibly relying on his supposed political merits during the campaign, and insisting on his request in an exceedingly importunate manner. Upon having realized that he never would be successful, after a long and mature premeditation he shot the President. When arrested, he said to the officer escorting him to the prison, that he was a Stalwart, and Arthur now President. In the following night he told James J. Brooks, chief of the secret service of the Treasury, that he had prayed to God for six weeks concerning the matter, that his resolution to remove the deceased had only become firmer by these prayers, and that his motive was patriotism. In prison he was repeatedly visited by ex-Judge Reynolds, of Chicago, to whom he stated that he committed the murder for love of the nation. A few weeks after, when he realized that his deed was condemned by all parties, he began in conversation with Reynolds to protest against the use of the term "murder" or "assassination" in reference to his act, which meant only to "remove" the President, and he

then wrote a proclamation to the people, stating that his action was a patriotic one, accomplished for the interest and welfare of the nation, and inspired of God; that he could not resist the impulse to do it which paralyzed the power of his own will; but that immediately after he had yielded to the inspiration he had regained his will power and mental health. This was and remained the whole of his defence. In the court he again and again used to interrupt judge, counsel for the prosecution and defence, witnesses and experts, by jokes and insults. He often expressed his persuasion that God would let perish court and jury, if necessary, to stop the trial, etc. On the other hand, when in prison, he behaved there generally in a quiet, modest, and courteous manner. One day he promised one of his guards in the court-room that he would abstain further from disturbing the proceedings, and when on breaking this promise he was rebuked by the guard, he answered that he was influencing the public opinion in his favor, and that none of those having been present on that day in the court would doubt his insanity. The evidence showed that his father, a descendant of a Huguenot family, who was an honest man, formerly court clerk and afterward cashier in a banking-house, had been of a peculiar character, entertaining especially peculiar opinions on religion. He believed that he was able by means of his faith to cure like Jesus Christ any disease, and he seemed to prefer the promise of eternal life which Christ made to his believers, to the earthly life. A brother of the accused's father was a drunkard during his later life. The mother of the defendant had become sickly a short time before his birth and remained so until her death, which followed a few years afterward. Besides, there was evidence offered by the defence tending to show insanity of more distant collaterals, as of his cousin, a girl who, it was said, was brought into an asylum at St. Louis for mental disease.

According to the statement of the then family physician, the accused showed in 1876 traces of emotional insanity. It was further shown by the evidence that he imagined himself a great politician, although usually failing in success with his lectures, which he used to advertise in an eccentric way; that he had great projects in mind and was of enormous self-opinion and vanity. As the defendant testified in his own behalf, he conceived one day the idea that everything could become straight

again in case Garfield was removed, and later on, after incessant prayers that it might be done otherwise, his persuasion of divine inspiration was confirmed, and he realized himself to be the tool of God, who always chooses the most perfect material for effectuating His designs. In this way, there was given at the same time the opportunity to make known to the public a book written by him on religious matters.

On behalf of the defence, Dr. Kiernan, of Chicago, and Dr. Spitzka, of New York, were called as medical witnesses, and both testified to his insanity. The former said that the prisoner suffered from inherited organic disease of the brain and exhibited a debilitated power of judgment. The latter thought him a moral monstrosity, but would not say that his unsoundness deprived him of the capacity of discriminating right from wrong.

On the part of the prosecution, thirteen experts were called to the stand, who declared unanimously that he was sane when he committed the act. Among them Dr. Walter Kempter, of Wisconsin, stated that the head form of the defendant was in fact abnormal, which had been urged by the defence, exhibiting a very noticeable depression on one side, but he denied that such anomalies could furnish a certain proof of insanity. He said, too, that he had never seen an insane person pleading his own insanity. Dr. Noble-Young, prison physician of Washington, testified that the defendant after his arrest was seized by a few attacks of malarial fever, but showed otherwise always a normal state of health.[1] The verdict was guilty. The prisoner was sentenced to death (on the 4th of February, 1882) after a motion for a new trial had been denied. An appeal was taken, especially on the ground that Judge Cox had erroneously excluded some evidence offered for the purpose of proving the insanity of the defendant. The Court of Appeals of the District of Columbia affirmed the judgment, and Guiteau was executed.

There is a striking similarity between Guiteau's case and both that of Prendergast, the murderer of Mayor Harrison of Chicago, and Czolgosz, the murderer of President McKinley. Whatever may be the views of medical authority, judges and lawyers almost universally maintain that all of these men were, under the

[1] "Der Neue Pitaval," edited by Dr. A. Vollert, Neue Serie, vol. xvii., Leipsic, 1882, preface and p. 1; 10 Fed. Rep., 161.

application of well-settled legal principles, justly and properly executed.

Delusional Insanity in States Where it is Held That the Ability to Distinguish Right from Wrong with Respect to the Particular Act Is Not the Sole Test of Responsibility.—A different decision has been made in the State of Alabama, which is also the rule in all courts where the right-and-wrong test is not accepted as the sole one.[1] As heretofore stated,[2] the Supreme Court of Alabama has repudiated, in Parsons *v.* State,[3] capacity to distinguish between right and wrong as an exclusive test of responsibility for crime,[4] and adopted the capacity to choose between right and wrong as a further test. The court in the same case added: "The same rule applies to delusional insanity, and necessarily conflicts with the old rule laid down by the English judges in McNaghten's case, that in cases of delusion the defendant must be considered in the same situation, as to responsibility, as if the facts with respect to which the delusion exists were real."

And in Georgia, where in consequence of an insane delusion the will is impaired, though the ability to discern the quality and the wrong of the act remains, but the exercise of the will is essential to the specific intent to constitute the act a crime, the accused is excused from criminal responsibility, if by reason of the delusion the will was overmastered with respect to the particular act.[5]

And again in Georgia, it was said that if in consequence of a delusion the will is overmastered, and there is no criminal intent, there is not criminal responsibility, though the accused has reason sufficient to distinguish between right and wrong as to the particular act.[6]

PHASES OF MENTAL IMPAIRMENT OTHER THAN INSANITY, AS DEFENCES TO CRIMINAL PROSECUTION.

Somnambulism, if Established, May Be a Defence.—The cases on this subject, dealt with in the courts, are not frequent. Yet there cannot be any doubt that the influences of somnambulism, when proved, will be fully appreciated.

[1] See *supra*, p. 455.
[2] See *supra*, p. 455.
[3] 81 Ala., 577; 7 Am. Crim. Rep., 1889.
[4] *Supra*, p. 456.
[5] Flanagan *v.* State, 30 S. E. Rep., 550; 103 Ga., 619.
[6] Taylor *v.* State, 105 Ga., 746; 31 S. E. Rep., 764.

In a Kentucky case, one Fain, accused of crime, offered evidence of having been affected from infancy with somnolentia or somnambulism. This evidence was refused by the court, which was held upon appeal to be error, and the conviction which followed was reversed for this and other errors.[1]

Unconsciousness.—Where the defence was a degree of unconsciousness which deprived defendant of knowledge of what she was doing, it was held proper to instruct the jury that if they believed this from the evidence, they should acquit.[2]

Mesmerism and Hypnotism.[3]—Mesmerism is so called from Frederick Anton Mesmer, who first propounded the theory that one individual could influence and control the will of another by the use of animal magnetism, at Paris in 1778.

The phenomena of mesmerism are now explained by modern hypnotism or artificial somnambulism, which has been of late extensively studied. "Hypnotism is also occasionally called *Braidism* (after the English surgeon Braid who first studied the phenomena of mesmerism scientifically) and *neuro-hypnology.*"[4]

The important and controlling fact as to all forms of alleged mesmeric or hypnotic control is, that it can seldom or never be exercised by one person over another, unless that other in the beginning of the attempt to exercise it consents in some degree to its exercise and thus becomes a party to it; and, moreover, it can rarely overcome the intuitive resistance to criminal suggestions of a moral person.[5]

Hypnotism was set up as a defence in the case of Eyraud the Parisian strangler, jointly indicted with a woman named Bompard, who turned state's evidence and claimed that she had been hypnotized by Eyraud, and while under his influence was induced to take part in the crime of murder. In that case testimony to establish her claim was rejected.[6]

[1] Fain *v.* Com., 78 Ky., 183; Austin Abbott, a Brief for the Trial of Criminal Cases, N. Y., 1889, p. 334. The California Penal Code, § 26, subd. 5, provides that persons committing a crime without being conscious thereof shall not be responsible. This is said to apply to cases of somnambulism and the like. People *v.* Methever, 132 Cal., 326; 64 Pac. R., 481.

[2] State *v.* Lewis, 136 Mo. 84; 37 S. W. Rep., 806.

[3] *Cf.* discussion of this subject from the medical point of view in Professor Fisher's article on Insanity, *supra*, p. 310.

[4] Century Dictionary, title "Mesmerism."

[5] See Dawson: "Hypnotism in its Scientific and Forensic Aspects," *The Arena*, vol. 18, p. 548–9; Sudduth: "Hypnotism and Crime," 13 Med. Leg. Jour., 239.

[6] The defence attempted in this case is explained in Tourette's mono-

In this country there has not yet been any reported case in which the legal aspect of hypnotism has been seriously or extensively considered.[1] The newspaper reports of such cases are too uncertain and sensational to be gravely regarded.[2]

Delirium from Fever or Overdose of Medicine.— As it is recognized by the courts that epileptic seizures may for a time suspend the mental capacity necessary for criminal responsibility, so the same may be stated of delirium even of a lower degree,[3] resulting from intermittent fever, and of frenzy from an overdose of medicine.

In a North Carolina case[4] the defendant was convicted of murder, after the court, on a plea of temporary insanity, had refused to charge the jury that he was not responsible if he was incapable of comprehending the nature of his act, and this incapacity was the result of an overdose of morphine. On appeal this refusal was held to be incorrect, and a new trial was granted.

INTOXICATION AS A DEFENCE TO CRIMINAL PROSECUTION.[5]

Two leading principles are well settled with respect to intoxication in its relation to criminal responsibility: (1) That drunkenness of itself does not relieve from crime;[6] and (2) that, on the

graph on "L'Hypnotisme et les États Analogues au Point de Vue Médico-Légal," Paris, 1889.

[1] The defence was attempted in People *v.* Worthington, 105 Cal., 166; 38 Pac. R., 689, but failed of any substantial proof. It played some part in People *v.* Ebanks, 117 Cal., 652; 49 Pac. R., 1049; 40 L. R. A., 269. An elaborate note is annexed to the report of this case in 40 L. R. A.

[2] See also 50 Alb. L. J., 217, 377; 47 *id.*, 362; 51 *id.*, 87; Ellinger: "Case of Czynski," 14 Med. Leg. Jour., 150; Chapin: "Forensic Aspect of Hypnotism," 3 Am. Lawyer, 534; Bell, "Hypnotism and the Law," 13 Med. Leg. Jour., 54; Case of Spurgeon Young (Chautauqua County, New York), 14 Med. Leg. Jour., 529.

[3] People *v.* Slack, 90 Mich., 448; 51 N. W. R., 533.

[4] State *v.* Rippy, 104 N. C., 752; 10 S. E. R., 259.

[5] As to proof of intoxication, by opinion evidence, see *infra*, p. 529.

[6] *Drunkenness as a Crime.* Drunkenness is itself a criminal offense when productive of disorderly conduct, and the disorderly conduct is then usually regarded and punished as a misdemeanor. (See the penal laws of the several States, title: Drunkenness, Disorderly Conduct, Intoxication.)

Definitions: *Drunkenness—Habitual Drunkard.* In Michigan *drunkenness* is a crime; it was there said that a drunkard is one with whom drunkenness has become a habit, and that one who had been drunk for six weeks was to be found guilty of drunkenness. People *v.* Radley, 8 Det. Leg. N., 467; 86 N. W. Rep., 1029; and it is not necessary to allege that he is a habitual drunkard, *Ibid.* There may be a habit of intoxication, though the one so ad-

other hand, settled insanity caused by alcoholic excesses may create criminal irresponsibility.

Insanity as the Result of the Use of Alcohol.—*Delirium Tremens.*—Under the decisions of the courts of the different States of this country, there cannot be any doubt that the properly so-called *delirium tremens* and similar states are treated as to criminal responsibility in the same way as insanity produced by any other cause, and the same legal test is applicable.[1] "A fixed frenzy or insanity, as *delirium tremens*

dicted may occasionally resist temptation, *ibid.* See *supra*, p. 429, for sale of intoxicating liquor as tort.

An *habitual drunkard* is stated to be one who becomes commonly or frequently intoxicated, and not necessarily one who has so surrendered himself to the habit that he must drink to excess and become intoxicated whenever the temptation is presented and an opportunity afforded. State *v.* Shinn, 63 Kan., 638; 66 Pac. R., 650; but *cf.* Herley *v.* Kettle (Tex. Civ. App.), 65 S. W. R., 48, where the question was left to the jury, and its finding was not disturbed; and Glenn *v.* Glenn, 87 Mo. App., 377, where in a divorce case an allegation that defendant had been under the influence of intoxicating drinks for a year, was not equivalent to an allegation that he was an habitual drunkard. See also *supra*, p. 380, for additional definition of *habitual drunkard* under divorce statutes.

In some States drunkenness in a public place is a criminal offence; see Bordeaux *v.* State, 31 Tex. Cr. Rep., 37, Rosenstein *v.* State (Ind.), 36 N. E. Rep., 652; 9 Ind. App., 290; State *v.* Tincher (Ind.), 21 Ind. App., 142; 51 N. E. Rep., 943; City of St. Joseph *v.* Harris, 59 Mo. App., 129; City of Gallatin *v.* Tarwater, 44 S. W. Rep., 750; 143 Mo., 40; People *v.* Markell, 20 Misc. R. (N. Y.), 149; 45 N. Y. Supp., 904; People *v.* Mulkins, 25 Misc. Rep. (N. Y.), 599; 54 N. Y. Supp., 414. In Massachusetts the person arrested for drunkenness may show that he has not already been convicted of that offence twice within one year preceding, and may then be discharged without trial. Mass. Laws, 1891, c. 427. See Commonwealth *v.* Morrissey, 32 N. E. Rep., 664; 157 Mass., 471; and in Massachusetts it has been held that it is within the Constitutional power of the legislature to punish drunkenness. Commonwealth *v.* Morrissey, *supra.* In Vermont it is a crime for one arrested for being drunk to fail to disclose where and from whom he obtained the intoxicant. *In re* Carpenter, 41 Atl. Rep., 1042. Under a general welfare clause in a municipal charter, the corporation can enact ordinances to punish open and notorious drunkenness. Village of Fairmont *v.* Meyer, 83 Minn., 456; 86 N. W. R., 457.

As a contempt. In Pennsylvania it has been held to be contempt to attend Court while intoxicated. Commonwealth *v.* Clark, 13 Pa. Co. Ct. Rep., 439.

As foundation of another's duty. (See *Torts, supra*, p. 429.) In some States it is a crime, and in some it gives rise to a private right of action, to sell or give intoxicating liquor to a drunken person, or habitual drunkard; these provisions and their operation are illustrated in the following cases: State *v.* Donovan, 10 N. D., 203; 86 N. W. Rep., 709; Barnes *v.* State, 19 Conn., 398; Mapes *v.* People, 69 Ill., 523; Humpeler *v.* People, 92 Ill., 400; Dudley *v.* Sautbine, 49 Iowa, 650; 31 Am. Rep., 165; State *v.* Ward, 75 Iowa, 637; 36 N. W. Rep., 765; State *v.* Heck, 23 Minn., 549; State *v.* Farr, 34 W. Va., 84; 11 S. E. Rep., 737. See also Farrell *v.* State, 45 Ind., 371; Deveny *v.* State, 47 Ind., 208; Williams *v.* State, 48 Ind., 306; Miller *v.* State, 5 Ohio St., 275.

[1] It is error, therefore, to permit

or '*mania a potu*,' destroys all legal responsibility, and although induced by voluntary intoxication, is a good defence. It annuls responsibility, provided the mental condition can stand the tests applied in other forms of insanity. The insane person is no more punishable for his acts than if the delirium had proceeded from causes not under his control."[1]

"Permanent insanity produced by habitual intoxication excuses a criminal act," and "when the mind is destroyed by long-continued habit of drunkenness, or where the habit of intoxication caused an habitual madness; and where a person is insane at the time he commits the crime, he is not punishable, although such insanity be remotely occasioned by undue indulgence in spirituous liquors, or from what in a moral sense is a criminal neglect of duty. For if the reason be perverted or destroyed by a fixed delusion, though brought on by his own vices, the law holds him not accountable."[2]

To the same effect is the following ruling of a New York court: "Simple drunkenness does not in itself constitute insanity, but if a person is in a state of *delirium tremens* at the time of doing an act, and is therefore unable to distinguish the quality of the act as right or wrong, he is relieved from criminal responsibility."[3] Rulings in other States show a similar tendency.[4] To constitute insanity caused by intoxication a defence to murder, it must be "settled insanity," and not a mere temporary mental condition;[5] even though that condition be a temporary diseased mental condition,[6] or a temporary frenzy or in-

evidence that though a person suffering with *delirium tremens* has no more control over his actions than a man suffering from other delirium, still he is sane. French *v.* State, 93 Wis., 325; 67 N. W. Rep., 706. But in California it was held that Penal Code, § 26, subd. 5, providing that persons committing a crime without being conscious thereof shall not be responsible, applies to cases of somnambulism (see *supra*, p. 479) and the like and *not* to insanity produced by *delirium tremens*. People *v.* Methever, 132 Cal., 326; 64 Pac. R., 481.

[1] "Am. and Eng. Ency. of Law," 1st ed., iv., 714, 2d ed., xvii., 414, and cases there cited. State *v.* Hand, 2 Hardesty (Del.), 149; 41 Atl. Rep., 192; 1 Marv., 545; Thomas *v.* State (Fla.), 36 So. R., 161; State *v.* Kavanaugh (Del.), 53 Atl. R., 335; 4 Penn., 131; State *v.* Potts, 100 N. C., 457; 6 S. E. R., 657.

[2] "Am. and Eng. Ency. of Law," 1st ed., iv., 713. State *v.* Harrigan, 9 Houst. (Del.), 369; 31 Atl. Rep., 1052; State *v.* Davis, 9 Houst. (Del.), 407; 33 Atl. Rep., 55; People *v.* Fellows (Cal.), 54 Pac. R., 830.

[3] People *v.* O'Connell, 62 How. Pr., 436; abstr. s. c. in 13 Weekly Dig., 95; affirmed in *id.*, 536.

[4] State *v.* Hand, *supra*; State *v.* Kavanaugh (Del.), *supra*.

[5] People *v.* Travers, 88 Cal., 233; 26 Pac. Rep., 88.

[6] State *v.* Kraemer, 49 La. Ann., 766; 22 So. Rep., 254; *contra* cases cited *infra*, p. 485.

sanity.[1] The courts show a tendency to apply the tests of responsibility rather strictly in cases of alleged alcoholic insanity.[2]

Art. 40*a*, of the Texas Penal Code, providing that temporary insanity produced by the recent use of intoxicating liquors does not destroy the responsibility for crime when defendant voluntarily makes himself intoxicated, does not apply to delirium tremens, the immediate cause of which is abstinence from liquor after a prolonged intoxication and which is always an involuntary result thereof.[3]

In Wisconsin it was held error to charge the jury, in effect, that intoxication resulting in total or partial suspension of brain function was voluntary madness; and that if the person while sober is sane, this condition does not relieve him from responsibility for the commission of a crime; and to refuse to charge that if drunkenness brings on a disease which causes such a degree of madness even for a time that it would relieve from criminal responsibility if caused in any other way, defendant was not responsible.[4]

Where delirium tremens is set up as a defence, the delirium must exist at the time the act was committed, as there is no presumption of its existence from antecedent fits from which the accused recovered; for this is a mere transient derangement of the mind, and there is no presumption of its recurrence or continuance.[5] Insanity[6] or delirium tremens[7] as a secondary effect of long continued excessive drinking, if it so deprived a man of his reason that he could not perceive the moral qualities of actions or tell right from wrong, is a complete excuse.[8] Intoxication before and at the time of a homicide is insufficient to prevent a conviction of murder, in the absence of a prolonged debauch and fixed insanity produced by drink,[8] or in the absence of a want of knowledge of right and wrong with respect to the particular act.[9]

Decisions Holding That Alcoholic Insanity Must be of Permanent

[1] State *v.* Clevenger, 156 Mo., 190; 56 S. W. Rep., 1078; Longley *v.* Commonwealth, 2 Va. Supr. Ct. Rep., 660; 37 S. E. Rep., 339.

[2] State *v.* Rigley, 62 Pac. R., 679.

[3] Kelly *v.* State, 31 Tex. Crim. R., 216; 20 S. W. Rep., 357.

[4] Terrill *v.* State, 74 Wis., 278; 42 N. W. Rep., 243. And see State *v.* Zorn, 22 Ore., 591, *contra supra*, p. 483, and *infra*, p. 485.

[5] Wagner *v.* State, 116 Ind., 181.

[6] State *v.* Wilson, 104 N. C., 868; 10 S. E. Rep., 315.

[7] State *v.* Agnew, 10 N. J. L. J., 165.

[8] Com. *v.* McMillan, 144 Pa. St., 610; 22 Atl., 1029.

[9] Hite *v.* Commonwealth, 31 S. E. Rep., 895; 96 Va., 489.

Form; That Is, Chronic Disease as a Result of Alcohol Must Be Shown.—The opinion enunciated by many courts seems to be that alcoholic insanity, to exempt from crime, must be of a relatively permanent character; while, on the other hand, mere temporary though decided alcoholic "insanity" is not deemed sufficient to cause that effect. "Temporary insanity, or unconsciousness of what one is doing, occasioned by intoxication, is no excuse for crime," and "temporary insanity resulting immediately from voluntary intoxication does not destroy legal responsibility or constitute a defence for crime."[1]

Contrary Rule in Some States.—There are, however, decisions to be found in some States which hold a different view on this matter. As, for instance, the following Texas ruling: To raise the question of temporary insanity from the voluntary recent use of liquor on a trial for murder, the drinking must precede the homicide, and the effect must be operative on the mind at the time of the killing to the extent of rendering the accused temporarily insane.[2]

Intoxication so excessive as to deprive a person of reason, *when not indulged in for the purpose of committing crime*, may relieve him from liability for a crime.[5]

The English courts have held generally on this subject the principles which are perhaps dominating in the United States. A state of disease brought about by a person's own act, as delirium tremens, caused by excessive drinking, is no excuse for committing a crime unless the disease so produced is permanent.[4] On the other hand, we meet with some rulings in the English courts which allow alcoholic insanity even of a mere temporary character as a defence to crime, as we have seen it to be allowed in some States in this country. These rulings state that the question is whether there is insanity or not; it is immaterial whether it was caused by the person himself or by the vices of his ancestors, and it is immaterial whether the insanity is permanent or temporary. If a man was in such a state of intoxication that he did not know the nature of his act or that his act was wrongful, his act would be excusable.

[1] "Am. and Eng. Ency. of Law," 1st ed., iv., pp. 714, 716. Longley *v.* Com., 2 Va. Sup. Ct. R., 660; 37 S. E. R., 339.

[2] Gonzales *v.* State, 31 Tex. Crim. Rep., 508; 21 S. W. Rep., 253.

[3] O'Grady *v.* State, 36 Neb., 320; 54 N. W. R., 556.

[6] 1 Hale P. C., 32; 4 Blacks., 26.

According to J. Dixon Mann the "permanency" required by a great number of courts refers presumably "rather to a continuance of the symptoms for a definite time after the individual has ceased to indulge in alcohol, than to an absolutely permanent condition." [1]

Probably the better rule is that if intoxication produces a secondary unsound mental state *which is not intoxication*, that disease will be considered insanity, though it be speedily curable.[2]

Voluntary Intoxication not Resulting in Permanent Insanity.—While intoxication resulting in a positive and settled state of insanity affords absolute exemption from criminal responsibility, other states of mental disturbance caused by alcohol are generally regarded in a wholly different light and do not exempt from all responsibility, even though temporarily the ability to distinguish between right and wrong with respect to the particular act may be destroyed.[3]

The Common-Law View of Voluntary Intoxication.—Drunkenness, whatever its temporary mental consequences, at common law does not affect criminal responsibility in any respect. An act is none the less a crime because the person perpetrating it happened to be in a state of intoxication at the time, because voluntary intoxication is no excuse for crime, even when the intoxication is so extreme that the person is insensible to his surroundings and unconscious of his acts. As voluntary drunkenness neither excuses nor justifies crime, therefore intoxication at the time of committing an offence cannot be set up as a defence. Drunkenness is no excuse for crime, neither is any state of mind resulting from drunkenness, unless it be a permanent and continuous result.[4]

[1] J. Dixon Mann, "For. Med.," etc., Phila., 1892, p. 360.

[2] *Cf.* Reg. *v.* Davis (Eng.), 14 Cox C. C., 563.

[3] See People *v.* Kloss, 115 Cal., 567; 47 Pac. Rep., 459. But in Kansas, where intoxication was the defence in a homicide trial, it was said that where a person has sufficient mental capacity to understand the nature and quality of the acts constituting the crime, and the mental capacity to know whether they are right or wrong, he is generally responsible if he commits such acts, whatever may be his capacity in other particulars; but if he does not possess this degree of capacity, then he is not so responsible. State *v.* O'Neil, 51 Kan., 651; 33 Pac., 287.

[4] People *v.* Travers, 88 Cal., 233; 26 Pac. Rep., 88; People *v.* Young, 102 Cal., 411; 36 Pac. Rep., 770; State *v.* Murphy (rape), 118 Mo., 7; 25 S. W. Rep., 95; State *v.* Fiske, 63 Conn., 388; 28 Atl. Rep., 572; Com. *v.* Woodley (Pa. Sup.), 31 Atl. Rep., 202; Conley *v.* Commonwealth, 17 Ky. L. R., 678; 32 S. W. R., 285.

This principle was established by many earlier decisions of the courts in relation to different crimes, as, for instance, blasphemy,[1] perjury,[2] homicide,[3] and it is maintained by a great number of later cases in all parts of the United States, most frequently in reference to homicide.[4]

Voluntary intoxication, as the phrase is used in the treatment of this subject, does not exclude intoxication produced by an uncontrollable desire to drink.[5] On the other hand, however, voluntary drunkenness which is the cause of a personal injury does not make a crime out of an accidental infliction: for instance, a homicide, from the accidental discharge of a revolver in the hands of an intoxicated person, is not a felony merely because of the drunkenness and its voluntary character.[6] In other words, voluntary drunkenness does not supply the elements of premeditation or malice. Nor does intoxication aggravate a crime.[7]

[1] People *v.* Porter, 2 Park. Cr. R., 14.

[2] People *v.* Willey, 2 Park. Cr. R., 19.

[3] People *v.* Rogers, 18 N. Y., 9, citing Plod., 19; 3 T. Co., 46; 4 Co., 125; Bac. Max., V.; 7 Carr. and P., 297, 317; 5 Mas. C. C. R., 28; 1 Curt. C. C. R., 1; 2 Park., 223, 235; 1 Hale, 32; 4 Blackst., 26; 1 Lewin Cr. C., 75. See People *v.* Robinson, 2 Park. Cr. R., 235, affirming 1 *id.*, 649; Friery *v.* People, 54 Barb., 319; 2 Keyes, 424.

[4] McCarty *v.* Com. (Ky.), 20 S. W. Rep., 229; Carpenter *v.* Com., 92 Ky., 452; 18 S. W. Rep., 9; Houston *v.* State, 26 Tex. App., 657; 14 S. W. Rep., 352; Gonzales *v.* State, 31 Tex. Crim. Rep., 508; 21 S. W. Rep., 253; Kelly *v.* State, 31 Tex. Cr. R., 216; Rather *v.* State (Tex.), 9 S. W. Rep., 69; Aszman *v.* State, 123 Ind., 347; 24 N. E. Rep., 123; Bernhardt *v.* State, 82 Wis., 23; 51 N. W. Rep., 1009; Fonville *v.* State, 91 Ala., 39; 8 So. Rep., 688; Springfield *v.* State, 96 Ala., 81; 11 So. Rep., 250; State *v.* Fiske, 63 Conn., 388; 23 Atl. Rep., 572; People *v.* Lane, 100 Cal., 379; 34 Pac. Rep., 856; People *v.* Vincent, 95 Cal., 425; Pac. Rep., 581; McCook *v.* State, 91 Ga., 740; 17 S. E. Rep., 1019; State *v.* Ashley, 45 La. Ann., 1036; 13 So. Rep., 738; Davis *v.* Com., 16 Va. L. J., 464; 15 S. E. Rep., 388; Garner *v.* State, 28 Fla., 113; 9 So. Rep., 835; State *v.* Wilson, 104 N. C., 868; 10 S. E. Rep., 315; O'Grady *v.* State, 36 Neb., 320; 54 N. W. Rep., 556 (forgery); Chrisman *v.* State, 54 Ark., 283; 15 S. W. R., 889; State *v.* O'Neil, 51 Kan., 651; 33 Pac. R., 287; State *v.* Davis, 9 Houst. (Del.), 407; 33 Atl. Rep., 55; Commonwealth *v.* Gilbert, 165 Mass., 45; 42 N. E. Rep., 336; State *v.* Kindred, 148 Mo., 270; 49 S. W. Rep., 845; State *v.* Brown, 181 Mo., 192.

In Georgia the code, § 4301, declares that drunkenness is no excuse for crime unless occasioned by the fraud or contrivance of another, in order to have a crime perpetrated. So, if persons give whiskey to another "in a social way and with no view or purpose at the time" to induce him to commit a crime, and afterward, while he is so drunk that he knows not what he does, procure him to commit a crime, he is legally responsible." McCook *v.* State, 91 Ga., 740; 17 S. E. R., 1019.

[5] See *infra*, p. 498, "Dipsomania"; p. 496, "Involuntary Intoxication."

[6] State *v.* Cross, 42 W. Va., 253; 24 S. E. Rep., 996.

[7] McIntyre *v.* People, 38 Ill., 514; State *v.* Donovan, 61 Iowa, 369; 16

Illustrative Cases.—In Virginia it was held that a moderate degree of drunkenness will be wholly irrelevant on the question of responsibility. One who had fired several shots at his wife, and at persons who attempted to interfere, and on being arrested by a policeman shot and killed him, is guilty of murder in the first degree, even though he was to some degree drunk at the time.[1]

In North Carolina, on a trial for murder the court instructed the jury that drunkenness was no excuse for crime, but that insanity as a secondary effect of long continued excessive drinking, if it so deprived a man of his reason that he could not perceive the moral qualities of actions, or tell right from wrong, was a complete excuse; that if defendant was so affected by a blow which he had formerly received that when he drank liquor he lost his reason, etc., and knowing this he voluntarily drank and became frantic, etc., and slew deceased without justification, he was guilty of murder.. The defendant was convicted, and on appeal it was held that the above charge was correct and the judgment was affirmed.[2]

In the District of Columbia it is "neither an excuse nor a palliation."[3]

Intoxication as Bearing upon Specific Intent.—In certain crimes the specific intent to commit the crime is essential. Thus, entering a house is not burglary unless done with the intent to steal;[4] in States where murder is divided into degrees, the first requires premeditation; and everywhere homicide is not murder but some degree of manslaughter if committed without intent to kill.[5] As we have seen, voluntary intoxication, which may often produce temporary incapacity to distinguish between right and wrong and hence from a psychological point of view incapacity to form a criminal purpose, is nevertheless rejected

N. W. Rep., 206; Ferrell *v.* State, 43 Tex., 503.

The many dicta in the old cases and text-books to the contrary must be taken to mean merely that drunkenness renders the offence more despicable in a moral sense. People *v.* Porter, 2 Park. Cr. R., 14; Coke's Littleton, 247; 4 Blackstone Comm., 26.

[1] Davis *v.* Com., 16 Va. L. J., 464; 15 S. E. R., 388.

[2] State *v.* Wilson, 104 N. C., 863; 10 S. E. R., 315. This case apparently refers to permanent insanity. *Cf.* State *v.* McDaniel, 115 N. C., 807; 20 S. E. R., 622; State *v.* Kale, 124 N. C., 816; 32 S. E. R., 892.

[3] Harris *v.* U. S., 8 App. D. C., 20; Lanekton *v.* U. S., 18 App. D. C., 348.

[4] N. Y. Penal Code, sec. 496.

[5] *Cf.* N. Y. Penal Code, secs. 183, 184.

by the courts as an excuse for a criminal act. The reasons of justice and public protection which have led to this rule are now generally thought not to require the exclusion from consideration by the jury of evidence of such intoxication as bearing upon specific intent. The mental effects of intoxication may deprive a man of the capacity to premeditate murder or to form an intent to steal; and though his consequent incapacity to distinguish between right and wrong even will not free him altogether, it will relieve him from guilt of the higher degrees of his crime.

Statutory Regulation.—In California,[1] New York,[2] Oregon,[3] Texas,[4] Utah,[5] and a few other States,[6] the matter has been regulated by statute.

The New York rule as embodied in the Penal Code is a fair statement of the prevailing, but not the common-law rule in the United States. The New York Penal Code provides in section 22 that "No act committed by a person while in a state of voluntary intoxication shall be deemed less criminal by reason of his having been in such condition. But whenever the actual existence of any particular purpose, motive, or intent is a necessary element to constitute a particular species or degree of crime, the jury may take into consideration the fact that the accused was intoxicated at the time, in determining the purpose, motive, or intent with which he committed the act." The principle involved in the first sentence of the section was derived from the common law, and is generally recognized as the rule in the United States. The remainder is an innovation.[7]

[1] Calif. Penal Code, sec. 22. Whenever the actual existence of any particular purpose, motive, or intent is a necessary element to constitute any species or degree of crime, the fact of intoxication may be considered. Held to permit such consideration only as bearing on degree of crime, People *v.* Vincent, 95 Cal., 425; 30 Pac. R., 581; People *v.* Methever, 132 Cal., 326; 64 Pac. R., 481. See also People *v.* Gordon, 103 Cal., 568; 37 Pac. R., 534; *cf.* Whitten *v.* State, 22 So. R., 483. See People *v.* Gilmore (Cal.), 53 Pac. R., 806; People *v.* Lane, 100 Cal., 379; 34 Pac. R., 856.

[2] N. Y. Penal Code, sec. 22; People *v.* Pekarz, 185 N. Y., 470.

[3] Oregon, Hill's Code, sec. 1,358, permitting the jury in a case involving actual motive, purpose, or intent to consider the fact that the accused was intoxicated at the time. See State *v.* Hansen, 25 Ore., 391, 35 Pac. R., 976; State *v.* Weaver, 58 Pac. R., 109.

[4] Texas Penal Code, art. 40 a.

[5] Utah Penal Code, sec. 20.

[6] *Cf.* People *v.* Odell, 1 Dak., 197; 46 N. W. R., 601.

[7] In 1881 it was held by the Court of Appeals that the rule was well settled that voluntary intoxication of one who without provocation committed a homicide, although amounting to a frenzy, did not exempt him from the same construction of his conduct and the same legal inferences, upon the question of intent as

The New York statute has been applied where the issue was intent to steal in entering a building, constituting burglary;[1] premeditation, constituting homicide, murder in the first degree.[2]

The Texas statute[3] is peculiar. It provides, "neither intoxication nor temporary insanity, produced by the voluntary recent use of ardent spirits, shall constitute any excuse for the commission of crime, nor shall intoxication mitigate either the degree or penalty of crime; but temporary insanity caused by liquor may be shown by defendant in mitigation of the penalty, and in cases of murder to determine the degree of murder of which the defendant may be found guilty." It will thus be seen that nothing short of temporary insanity can be considered at all in Texas. If temporary insanity exist, it may mitigate the penalty of any crime, but change the degree of murder only.[4]

The New York Rule Now Generally Adopted in Other States.— The principle established by the New York Penal Code respecting *intoxication*, as above set forth, is to-day recognized generally in most of the United States, as is shown by the reported cases in the different States, especially in cases of homicide.[5] Some

affecting the grade of his crime, as were applicable to a person entirely sober. Flanagan *v.* People, 86 N. Y., 559.

While this case was pending on appeal, and largely because of the seeming severity of the rule as there applied, the new law in the State of New York was established by its Penal Code, section 22, quoted above.

[1] People *v.* Burns, 2 N. Y. Cr. R., 415.

[2] People *v.* Conroy, 2 N. Y. Cr. R., 247; 33 Hun., 119; aff'd 97 N. Y., 62; People *v.* Cassiano, 1 N. Y. Cr. R., 505; 30 Hun., 388; People *v.* Leonardi, 143 N. Y., 360; 38 N. E. R., 372; People *v.* Mills, 98 N. Y., 176; People *v.* Fish, 125 N. Y., 136; etc., etc.

[3] Texas Penal Code, art. 40 a.

[4] Houston *v.* State, 26 Tex. Cr. App., 657; 14 S. W. R., 352. See Evers *v.* State, 31 Tex. Cr. App., 318; 20 S. W. R., 744; Edwards *v.* State, 54 S. W. R., 589; Little *v.* State, 61 S. W. R., 483; King *v.* State, 64 S. W. R., 245; Cleland *v.* State, 65 S. W. R., 189; Scott *v.* State, 12 Tex. Cr. App., 31; Crew *v.* State, 23 S. W. R., 14; Delgado *v.* State, 29 S. W. R., 1070; Ayers *v.* State, 26 S. W. R., 396; Gonzales *v.* State, 36 Tex. Cr. App., 508; 21 S. W. R., 253; Wright *v.* State, 37 Tex. Cr., 627; 40 S. W. R., 491; White *v.* State, 30 S. W. R., 556.

[5] See also cases cited *infra*, pp. 491–493, and *supra*, p. 488 and p. 489. King *v.* State, 90 Ala., 612; 8 So. R., 856; Fonville *v.* State, 91 Ala., 39; 8 So. R., 688; Chatham *v.* State, 92 Ala., 47; 9 So. R., 607 (larceny); Walker *v.* State, 91 Ala., 76; 9 So. R., 87; Springfield *v.* State, 96 Ala., 81; 11 So. R., 250; Chrisman *v.* State, 54 Ark., 283; 15 S. W. R., 889; State *v.* Fiske, 63 Conn., 388; 98 Atl., 572; State *v.* Faino (Del.), 2 Hard., 153; 1 Marv., 492; 41 Atl. R., 134; Garner *v.* State, 28 Fla., 113; 9 So. R., 835; Crosby *v.* People, 137 Ill., 325; 27 N. E. R., 49; Schwabacher *v.* People, 165 Ill., 618; 46 N. E. R., 809 (burglary); Booker *v.* State, 156 Ind., 435; 60 N. E. R., 156; 54 L. R. A., 391; State *v.* O'Neil, 51 Kan., 651; 33 Pac. R., 287; Conley *v.* Com., 17 Ky. Law R., 678; 32 S. W. R., 285; State *v.* Hill, 46 La. Ann., 27; 14 So. R., 294; Com. *v.* Dorsey, 103 Mass., 412; as explained in Hopt *v.* People, 104 U. S., 631;

few States adhere to the severe common law rule, or yield to only slight modifications of it.[1]

In crimes, however, where specific intent need not be proved or may be presumed against the defendant, his intoxication cannot be considered at all.[2] And in all cases, if it once appears that an intent existed, intoxication thereupon becomes no palliation and immaterial.[3]

There has been some difference of opinion as to whether intoxication can reduce a homicide from murder in the first degree to manslaughter on the ground of incapacity to form an intent to kill, or only to a lower degree of murder, on account of incapacity to premeditate.[4] This question is not likely to arise where the matter is regulated by statute.

Illustrative Cases.—In a Utah case the defendant, one Hopt, was convicted and sentenced for murder in the first degree. The Supreme Court affirmed the judgment. On a writ of error Justice Gray, of the United States Supreme Court, delivered the following opinion: "At common law, indeed, as a general rule, voluntary intoxication affords no excuse, justification, or extenuation of a crime committed under its influence. But when a statute establishing different degrees of murder requires deliberate premeditation in order to constitute murder in the first degree, the question whether the accused is in such a condition of

O'Grady *v.* State, 36 Neb., 320; 54 N. W. R., 556 (forgery); Warner *v.* State (N. J.), 29 Atl. R., 505; Wilson *v.* State, 60 N. J. Law, 171; 37 Atl. R., 954; State *v.* Hansen, 25 Ore., 391; 35 Pac. R., 976; Com. *v.* Dudash, 204 Pa., 124; 53 Atl. R., 756; State *v.* Ford (S. Dak.), 92 N. W. R., 18; Wilcox *v.* State, 94 Tenn., 106; Davis *v.* Com., 16 Va. L. J., 464; 15 S. E. R., 388; State *v.* Davis (W. Va.), 43 S. E. R., 99; Bernhardt *v.* State, 82 Wis., 23; 51 N. W. R., 1009; Hempton *v.* State, 111 Wis., 127; 86 N. W. R., 596; Gustavenson *v.* State (Wyo.), 68 Pac. R., 1006. See 31 Cent. Law J., 108, notes and cases collated.

[1] State *v.* Morgan, 40 S. C., 345; 18 S. E. R., 937; State *v.* O'Reilly, 126 Mo., 597; 29 S. W. R., 577; State *v.* Sneed, 88 Mo., 138.

[2] *E.g.*, in a conspiracy case the intoxication of the accused at the very moment his co-conspirator was actually committing the acts charged, McLeroy *v.* State, 120 Ala., 274; 25 So. R., 247. In a forgery case, drunkenness not at the time of executing the forgery, but at the time of attempting to utter the forged instrument, State *v.* Peterson, 129 N. C., 556; 40 S. E. R., 9.

[3] State *v.* West, 157 Mo., 309; 57 S. W. R., 1071 (stopping a train and attempting to rob passengers conclusively proves intent). In New Jersey it was held that where defendant, though intoxicated, had the capacity to form an intent, and did form and execute the intent to take the life of deceased, the intoxication does not reduce the crime to murder in the second degree. Warner *v.* State, 56 N. J. L., 686; 29 Atl. R., 505.

[4] See King *v.* State, 90 Ala., 612; 8 So. R., 856.

mind, by reason of drunkenness or otherwise, as to be capable of deliberate premeditation, necessarily becomes a material subject of consideration by the jury. The law has been repeatedly so ruled in the supreme judicial court of Massachusetts in cases tried before a full court, and in cases of other States. And the same rule is expressly enacted in the Penal Code of Utah, section 20."[1]

In Alabama the courts have held that when the intoxication goes so far as actually to deprive a person of the capacity to form the essential felonious or malicious intent, without which the act committed is not a crime, this has not only a bearing on the degree or species of the crime, as in case of homicide, but can even excuse him from any guilt at all. Intoxication so great as to render a person incapable of forming a felonious intent is a defence to a prosecution for larceny.[2]

So in Nebraska it was held that, although intoxication does not justify or excuse crime, intoxication so excessive as to deprive a person of reason, when not indulged in for the purpose of committing crime, may relieve him from liability for a crime while so intoxicated.[3] And when he is accused of assault with intent to rape, his intoxication may be shown to determine whether he was capable of entertaining the intent.[4]

And so also in Arkansas, in a case of murderous assault the same rule was followed: "Though generally voluntary drunkenness is no defence to a crime, yet where an intent is an essential element of the crime committed it may be shown that the accused was too drunk to entertain the necessary intent."[5]

[1] Hopt *v.* People, 104 U. S., 631 (Stewart Chaplin, "Cases on Criminal Law," Boston, 1891, p. 78)—citing for the common law as formerly held: U. S. *v.* Drew, 5 Mas., 28; U. S. *v.* McGlue, 1 Curt., 1; Fed. Cas., No. 15,679; Com. *v.* Hawkins, 3 Gray (Mass.), 463; People *v.* Rogers, 18 N. Y., 9. For the exception as by the New York statute: Com. *v.* Dorsey, 103 Mass., 412; Pirtle *v.* State, 9 Humph. (Tenn.), 663; Kelly *v.* Com., 1 Grant. (Pa.) Cas., 484; People *v.* Belencia, 21 Cal., 544; State *v.* Johnson, 40 Conn., 136; Pigman *v.* State, 14 Ohio, 555; Compiled Laws of Utah of 1876 pp. 568, 569. For fuller citation of cases, see *supra*, p. 490.

[2] Chatham *v.* State, 92 Ala., 47; 9 So. R., 607; State *v.* Kavanaugh (Del.), 53 Atl. R., 335 (larceny); see also State *v.* Snow (Del.), 51 Atl. R., 607, holding that inasmuch as an intent to steal is essential to the crime of burglary, an intoxicated person who enters the house of another believing it to be his own is not guilty of a crime. But *cf.* State *v.* Ford (S. Dak.), 92 N. W. R., 18.

[3] O'Grady *v.* State, 36 Neb., 320; 54 N. W. R., 556.

[4] Head *v.* State, 43 Neb., 30; 61 N. W. Rep., 494; see also Latimer *v.* State, 55 Neb., 609; 76 N. W. R., 207; Hill *v.* State, 42 Neb., 503; 60 N. W. R., 916.

[5] Chrisman *v.* State, 54 Ark., 283;

In Tennessee it is permissible to show defendant's immoderate use of drugs and whiskey, to fix the degree of crime depending on deliberation and malicious purpose.[1]

In Connecticut, on a trial for assault with intent to murder, the court charged that intoxication was no defence, but should be considered where a specific intent was necessary, and that defendant was not guilty if he was so intoxicated as to have lost his intelligence, so that there was a reasonable doubt whether he was able to form a purpose to kill or to know what he was doing, and it was held that this charge was not prejudicial to defendant.[2]

Modern Rule as to Intoxication Requires Consideration of Its Degree or Extent.—A necessary consequence of the rule permitting evidence of intoxication to determine the intent or degree of crime is that the degree of intoxication must be taken into account; a difficult question which could not arise under the strict early rule. For the question whether the accused, in a given case, was able to form the intent, deliberation, or premeditation required for the particular crime depends entirely on the prior question as to the degree of intoxication.[3]

The prevailing rule appears to be that the intoxication must be so great as practically to destroy the capacity to deliberate, or to form a guilty intent.[4] But in New York the statute has been construed to mean that intoxication is in any case to be considered simply as bearing upon the question whether the accused did in fact so deliberate.[5]

In Florida, on the trial of an indictment for murder in the

15 S. W. Rep., 889. And see also Crosby *v.* People, 137 Ill., 325; 27 N. E. Rep., 49; Fonville *v.* State, 91 Ala., 39; 8 So. Rep., 688; King *v.* State, 90 Ala., 612; 8 So. Rep., 856.

[1] Wilcox *v.* State, 94 Tenn., 106; 28 S. W. Rep., 312.

[2] State *v.* Fiske, 63 Conn., 388; 28 Atl. R., 572. But where the crime of assault *with intent* to kill, by statute included as an element the crime of assault with a deadly weapon, of which specific homicidal intent is not an essential part, it was proper to refuse to charge that if the defendant was unable from intoxication to form an intent he should be *acquitted*. People *v.* Lane, 100 Cal., 379; 34 Pac. R., 856. See also to same effect where statutory offence of assault with intent to ravish included the crime of assault, Whitten *v.* State, 22 So. R., 483; and to same effect, Brennan *v.* People, (Colo.) 86 Pac. R., 79.

[3] Garner *v.* State, 28 Fla., 113; 9 So. R., 835; Bernhardt *v.* State, 82 Wis., 23; 51 N. W. R., 1009. See Wright *v.* State (Tex. Cr. App.), 40 S. W. Rep., 491; 37 Tex. Cr., 627.

[4] Casat *v.* State, 40 Ark., 511; Aszman *v.* State, 123 Ind., 347; 24 N. E. R., 123; Booher *v.* State, 156 Ind., 447; 60 N. E. R., 155; State *v.* Bruce, 48 Iowa, 536; 30 Am. R., 403; Keenan *v.* Commonwealth, 44 Pa., 55; 84 Am. Dec., 814.

[5] People *v.* Leonardi, 143 N. Y., 360.

first degree, it was held error to charge that voluntary intoxication is no excuse for crime committed under its influence, and that if a person is sober enough to form the intention to shoot another and does shoot and kill him, the law presumes that he is sober enough to form a premeditated design to kill him, and he is criminally liable for the act; since, in such case, the fact that defendant was voluntarily intoxicated is to be considered in determining whether he was in a condition of mind capable of forming a premeditated design.[1]

In Wisconsin the court charged that: "If you shall find that defendant at the time he struck the blow was in such a condition from the use of spirituous liquor that he was incapable of forming an intent to kill, then you may consider the question of intoxication; . . . in short, was he at the time in such a condition mentally as to be incapable of forming this premeditated design to effect death?" It was held to be no error to refuse to charge: "If you have a reasonable doubt whether, at the time of the killing, defendant had sufficient capacity deliberately to think upon and rationally to determine so to kill, you cannot find him guilty of murder in the first degree, although such inability was the result of intemperance."[2]

In Delaware it was held that intoxication will not reduce homicide below the grade of murder in the first degree unless accused "did not know what he was doing."[3]

In Oregon it was held that an instruction, that while voluntary drunkenness of itself cannot avail as a defence to a charge of murder in the first degree, yet it should be considered on the question of whether the defendant committed the act with deliberation and premeditation, in connection with all the other facts, in determining the degree of guilt, properly covers the question of intent.[4] But where the evidence shows that accused was in possession of his full mental powers, a charge on the law of intoxication is properly refused.[5]

Judge Peckham's Opinion in People v. Leonardi.—In People *v.* Leonardi (New York)[6] the trial judge charged the jury

[1] Garner *v.* State, 28 Fla., 113; 9 So. R., 835.

[2] Bernhardt *v.* State, 82 Wis., 23; 51 N. W., 1009.

[3] State *v.* Davis, 9 Houst., 407; 33 Atl. Rep., 55.

[4] State *v.* Zorn, 22 Ore., 591; 30 Pac. R., 317.

[5] Lapey *v.* State, 29 Tex. App., 63; 14 S. W. R., 398.

[6] 143 N. Y., 360; *cf.* People *v.* Fish, 125 N. Y., 136; People *v.* Corey, 148 N. Y., 505.

in a murder ease, where the defendant was mueh intoxicated when he eommitted the homicide, that if the defendant "was sober enough to know what he was about, and that the act was wrong, then his intoxieation and his motive would both exist and the one would not destroy the other. If his intoxication made him more exeitable, and led him the more readily and easily to eommit the erime, to form the intent, and to reaeh a eonelusion, as the result of deliberation upon it, then his intoxication would not help him. He must be so eompletely intoxieated in order to be exeused as to be destitute of the eapacity to realize the wrongful nature of his act; that his acts are wholly aimless and without purpose." The defendant was found guilty of murder in the first degree. The Court of Appeals reversed the conviction on the ground that the eharge required too high a degree of intoxication to reduee the homicide to murder in the seeond degree or manslaughter. The court say, by Peckham, J.: "We do not think that under this statute the intoxieation need be to sueh an extent as neeessarily and actually to preelude the defendant from forming an intent or from being actuated by a motive, before the jury would have the right to regard it as having any legal effeet upon the eharaeter of defendant's aet. . . . That a man may be even grossly intoxicated and yet be eapable of forming an intent to kill or do any other eriminal act is indisputable, and if, while so intoxieated, he forms an intent to kill and earries it out with premeditation and deliberation, he is without doubt guilty of murder in the first degree, and the jury should, when sueh a defenee is interposed, be so instrueted. It is a most important and far-reaehing statute in its possible effects, and the jury ought to be warned that where the criminal act is fairly and elearly proved, the faet of intoxieation as furnishing evidenee of the want of the eriminal intent which the proof might otherwise show, should be eonsidered by it with the greatest care, eaution, and eireumspection, and sueh faet ought not to be allowed to alter the eharaeter or grade of the eriminal aet unless they have a fair and reasonable doubt of the existenee of the neeessary eriminal purpose or intent after a eonsideration of such evidenee of intoxieation. . . . It should still be remembered that voluntary drunkenness is never an exeuse for erime."

Criminal Intent Sometimes Antecedent to Intoxication.—It should be clearly stated in eonsidering voluntary in-

toxication as affecting guilt that we assume that the accused when getting drunk did not have any criminal intent in so doing. It is common experience that some criminals drink to engender in themselves the courage or recklessness necessary for the execution of the criminal design previously conceived; and that again others, who are saturated with the idea but not yet decided to commit the crime, in this ambiguous state of mind start to drink hoping they may thus be emboldened to commit the crime. Such facts, showing "peculiar malignant deliberation," cannot be allowed to have any other effect than to aggravate the crime.[1]

Intoxication as a Collateral Issue.—Intoxication may frequently be admissible of proof, not as bearing on the issue of mental capacity directly, but because material as tending to throw light on the circumstances of the case.[2]

Involuntary Intoxication.—When speaking of voluntary intoxication, we excluded the case of one forced to drink by others, either by means of physical constraint or of serious threats, and equally the case where the person induced to take the drink did so not under his own but under the authoritative responsibility of another, as of his physician. We also excluded the case of fraud; for instance, where a strong drink was substituted, without knowledge of the person in question, for a harmless one, and he so becomes the victim of malice of others, perhaps even the tool for their felonious designs. We also excluded the states of temporary intolerance to alcohol, provided the individual did not know or could reasonably not be expected to foresee this peculiarity.[3] On the other hand, there arises the presumption that the drunkenness is to be regarded as voluntary when the person is aware of, or ought to be cautioned against, such intolerance, especially in case the latter presents a habitual condition. Yet it must be admitted the question which arises in this connection is a very difficult one. It follows further, that a person who indulged in liquor to greater extent than he sincerely wished, but did so animated and stimulated "in a social way," is to be considered as under voluntary intoxication; for still, he

[1] See Wharton on Crim. Law (10th ed.), sec. 49; State *v.* Kale, 32 S. E. Rep., 892; 124 N. C., 816; Nevling *v.* Com., 98 Pa. St., 323; Cook *v.* State (Fla.), 35 So. R., 665; State *v.* Truitt (Del.), 62 Atl. R., 790.

[2] Jenkins *v.* State, 93 Ga., 1; 18 S. E. R., 992.

[3] Roberts *v.* People, 19 Mich., 401.

had his own will, although he did not follow his own feeling or inclination.[1]

In regard to the influence which involuntary intoxication has on the question of guilt, the "American and English Encyclopedia of Law" says:

"If a person be made drunk by fraud or stratagem of another,[2] or by the unskilfulness of his physician, he is not responsible for his acts; and a man, owing to temporary debility or disease, maddened by the quantity of wine which he usually takes in his normal condition, is not voluntarily insane."[3]

Indeed, considering the fact that the statutes and court decisions in New York and elsewhere are referred to as determining that voluntary drunkenness does not exempt from crime, we may assume the contrary in case of involuntary intoxication, and so the only difficulty which remains is the exact definition of what is, in a given case, to be regarded at law as voluntary or involuntary intoxication. In some States a definition is given by the statutes themselves.

The Code of Georgia, section 4,301, declares that drunkenness is no excuse for crime unless occasioned by the fraud or contrivance of another, in order to have a crime perpetrated. So, if persons give whiskey to another, "in a social way and with no view or purpose at the time to induce him to commit a crime, and afterward, while he is drunk, that he knows not what he does, procure him to commit crime," it is held that he is legally responsible.[4]

The responsibility in each case depends on the question whether the drunkenness was voluntarily produced by the free will of the accused. In such case the accused is responsible for the act committed while intoxicated. Of course, he is irresponsible when he is insane (if his insanity be of a character to relieve him of responsibility[5]), and if while so insane and thus deprived

[1] McCook *v.* State, 91 Ga., 740; 17 S. E. R., 1019; see *supra*, p. 496. In its criminal results, with voluntary intoxication is classed intoxication which is the result of an uncontrollable impulse to drink. See State *v.* Haab, 105 La., 230; 29 So. R., 725.

[2] Pearson's case (Eng.), 2 Lewin, Cr. Cas., 144.

[3] "Am. and Eng. Ency. of Law," 1st ed., vol. iv., p. 715, citing State *v.* Johnson, 40 Conn., 136; Choice *v.* State, 31 Ga., 424; Rogers *v.* State, 33 Ind., 543; Roberts *v.* People, 19 Mich., 401; People *v.* Robinson, 2 Park. Cr. R., 235.

[4] McCook *v.* State, 91 Ga., 740; 17 S. E. R., 1019.

[5] In such case the insanity is the defence, not the drunkenness; and such insanity must be of a character

of the knowledge of right and wrong, he becomes intoxicated and then commits a crime, he cannot be punished for it, because his insanity perverted or destroyed his moral faculty.[1]

Dipsomania as a Phase of Involuntary Intoxication.

It has been claimed by some medical authorities and contested by others[2] that there exists a species of insanity called *dipsomania*, which results in an uncontrollable desire for alcohol, paralyzing in this regard the powers of will, although not influencing noticeably the integrity of intellect. This impulse is said often to lead into a state of absolute intoxication. Such mental anomaly has repeatedly been relied on as a defence to criminal acts which had been committed in a drunken state, and this plea has become more and more frequent in later times. We have mentioned this subject above in connection with impulsive insanity, to which it appertains from a medico-psychological point of view, but refer to it here for practical reasons.

First we will consider the condition of alleged dipsomania according to the "right-and-wrong test." The courts which preserve that test as an exclusive one presume conclusively that a corresponding power of will exists wherever there is the faculty of discriminating right from wrong in reference to the particular act. Therefore, when criminal responsibility comes under consideration, they prevent *a limine* any question from being raised other than that of the knowledge of right or wrong. Accordingly, in those States where this test exclusively dominates, there is room only for a plea of such insanity as affects the intellect, but not that which has its apparent effect only on the will, and consequently a plea based on an abnormal condition of mind resulting from dipsomania is irrelevant at law.

Such is the view taken of dipsomania by the New York courts. An appetite for strong drink so powerful as to overcome the will of the accused, and to amount to a disease, where he was able to distinguish between right and wrong at the time and in

to excuse the act of getting drunk; the addition of drunkenness to insanity does not withdraw the protection due to insanity. State *v.* Kraemer, 49 La. Ann., 766; 22 So. Rep., 254.

[1] See note 5, page 497.

[2] See article on Insanity in this volume, p. 259.

respect to the act committed, will not exonerate him from responsibility for the crime.[1]

In a wholly different way such a plea is dealt with in those States where the right-and-wrong test is not the exclusive one. In those States there exists no particular legal test of responsibility at all, or a test is admitted of the "power to choose." Where, therefore, a person, in regard to a particular act, though knowing right from wrong, has so far lost this power in consequence of a mental disease, however caused, he will be exempt from crime. The courts in those States have consequently admitted a plea based on such an abnormal condition as that caused by dipsomania. The only question submitted to the jury is in each case whether such disease exists, and this preliminary question once settled, they may find whether the accused labored under such an abnormal condition produced by this disease. The judicial authorities even in those States use the greatest possible precaution in every given case to avoid the abuse of such a defence.

As marking this tendency we quote a judicial opinion which admitted the plea of insanity from dipsomania in principle, but would not allow its consequences to be drawn to their full extent, preferring a middle course. On a trial for murder, where defendant pleaded insanity, the court instructed that "if the jury believe the prisoner was a dipsomaniac, and by reason of the influence of such disease became so drunk as to be unconscious of his acts, and the act was done while in this condition, then the presumption of malice would be rebutted and the prisoner was guilty of manslaughter." The prisoner was convicted. On appeal the charge was held correct and the conviction sustained.[2]

Arising from the hypotheses (1) that the crime was committed in a state of unconsciousness caused by intoxication, and (2) that the intoxication was caused by the disease, it seems to us that there should have been two alternatives left for the decision of the jury, viz.: (1) Either the disease destroyed the

[1] Flanagan *v.* People, 86 N. Y., 559; 13 Weekly Dig., 242. See People *v.* Otto, 38 Hun, 99; 4 N. Y. Cr. Rep., 154; People *v.* Leary, 105 Cal., 486; 39 Pac. R., 24; Commonwealth *v.* Gilbert, 165 Mass., 45; 42 N. E. R., 336; see also State *v.* Haab, 105 La., 230; 29 So. R., 725.

[2] State *v.* Potts, 100 N. C., 457; 6 S. E. R., 657; State *v.* McDaniel 115 N. C., 807; 20 S. E. Rep., 622.

moral faculty and was consequently the only cause of the intoxication, in which case they should acquit; (2) or the disease did not wholly destroy the will, but influenced it considerably, in which case they should find the prisoner guilty of a lower grade of homicide, either murder of a lower degree or manslaughter, according to the stronger or lesser influence of the disease. The first alternative has been wholly disregarded by the court in the case just cited.

The English Law of Temporary Intoxication.—Except the cases of delirium tremens and analogous conditions as created above, the English courts do not recognize in any way intoxication as bearing on the question of guilt. A crime committed during drunkenness is as much a crime as if it were committed during sobriety, and the jury has nothing to do with the fact that the man was drunk. The prisoner is supposed to know the effect of drink, and if he took away his senses by means of drink, it is no excuse at all.[1]

The man who chooses to drink to excess, and when drunk from time to time commits acts of brutal violence, must be taught that he is answerable both for being under the influence of alcohol and for the acts such influences induce.[2]

The above principle is usually carried out to its full effect in grave crimes, and is applied even to cases where a person, by reason of his natural constitution, shows a particular intolerance to alcohol, and therefore approaches, when intoxicated, a state of real insanity.

Mental Incapacity from Drugs.

With respect to intent and motive, the rule with reference to intoxication from liquor applies to a similar mental condition produced by the use of drugs. However, where the condition is produced wholly or partly by voluntary indulgence in drugs, the

[1] Regina *v.* Williams, Old Bailey, 1886.

[2] Sir Henry James in a case reported by The Times newspaper, Jan. 4th, 1892. See on the whole matter J. Dixon Mann, "For. Med.," Phila., 1893, p. 359. But see Rex *v.* Thomas, 7 Car. & P., 820, where Parke, B., says: "Drunkenness may be taken into consideration in cases where what the law deems sufficient provocation has been given, because the question is in such cases whether the fatal act is to be attributed to the passion of anger, excited by the previous provocation; and that passion is more easily excitable in a person when in a state of intoxication than when he is sober." *Cf.* Reg. *v.* Doody, 6 Cox Cr. Cas., 463; Reg. *v.* Gamlin, 1 Fost. & F., 90.

defence is not governed by statutes relating to the defence of "intoxication";[1] and where the intoxication is produced by drugs, and not by the voluntary use of ardent spirits, it has been held that a statute declaratory of the common-law measure of responsibility of persons intoxicated by liquor is so far inapplicable that a person intoxicated by drugs is excused if he does not know the character of his act and its consequences, and has not sufficient will power to refrain from the act.[2]

EVIDENCE OF MENTAL UNSOUNDNESS.

In General.

The starting-point of any judicial inquiry into sanity is the presumption of fact based upon experience that every man is sane. The presumption of sanity has its principal bearing upon the burden of proof. The general rule is that the burden of proof is on the party to the litigation who asserts insanity. This subject is fully treated below.[3]

The nature of admissible evidence to prove insanity by controverting the presumption of sanity may be gleaned from the various parts of this article dealing with the different phases of mental unsoundness and their legal relations.[4] There are, however, many reported cases which pass upon the admissibility of evidence near the border of relevancy or materiality, as well as upon the weight of different species of proof; and it is our main purpose to collect and discuss some of the more significant of these decisions.

The Alleged Lunatic as a Witness of His Own Insanity.

The alleged lunatic is generally permitted to take the stand in his own behalf and testify as to his own symptoms.[5] Under the common law in its early strict form, a person might not "stultify" himself by alleging his own insanity.[6] Moreover,

[1] Edwards *v.* State, 38 Tex. Cr., 386; 43 S. W. Rep., 112; 39 L. R. A., 262 (cocaine and morphine); Edwards *v.* State (Tex. Cr. App.), 54 S. W. R., 589.

[2] Cannon *v.* State (Tex.), 56 S. W. R., 351.

[3] See "Burden of Proof," *infra*, p. 556.

[4] For an example of a suggestive case as to the line of proof that may be followed, see Ruter *v.* Mut. Life Ins. Co., 169 U. S., 139; 18 Sup. Ct., 300; aff'g 70 Fed., 954; 17 C. C. A., 537.

[5] *Cf.* "Insane Persons as Witnesses," *supra*, p. 421.

[6] *Supra*, p. 354.

the doctrine of interest disqualified a party to an action from testifying in his own behalf. But these strict rules have been modified in most jurisdictions. The evidence of a defendant tending to exculpate him from a criminal charge on the ground of insanity is regarded as competent, provided he is a competent witness for himself under some statutory abolishment of the common-law disqualification for interest, and he may testify (if the law of the State allows the defense) that he was seized with an uncontrollable impulse to commit the crime.[1]

Even with respect to testimony by the defendant himself, however, the rule as to opinion evidence must be observed. Neither in criminal nor in civil cases would the witness be allowed to volunteer the mere inexpert opinion that at the time he executed a contract or committed an unlawful act he was suffering from a mental disease. He must confine his testimony to the objective facts from which the court may draw its conclusion as to his sanity at the time in question.[2]

In any case, before the alleged incompetent may testify in his own behalf, either to prove his sanity or his insanity at the given time, the court must first pass upon the question whether such person is competent to be a witness.[3]

When the inquiry is into the present sanity of a person, for the purpose of having him adjudged incompetent, an oral examination is frequently had during the trial. The alleged incompetent takes the witness-stand and is subjected to a direct and cross-examination, designed to exhibit to the jury his mental qualifications or defects. And in any trial where the present mental condition of a party has relevancy to the issue, the jury are privileged to consider his demeanor upon the witness-stand along with the other evidence.[4]

[1] Abbott *v.* Commonwealth, 23 Ky. L. R., 226; 62 S. W. R., 715; *cf. supra*, p. 450, as to irresistible impulse.

[2] O'Connell *v.* Beecher, 21 App. Div., 298; 47 N. Y. Supp., 334.

[3] *Supra:* "Insane Persons as Witnesses," p. 421.

[4] Commonwealth *v.* Buccieri, 153 Pa. St., 535; 26 Atl. R., 228; 32 W. N. C., 113; see also People *v.* Burgle, 123 Cal., 303; 55 Pac. R. 998. But his demeanor on the stand must not be irrelevant by reason of lapse of time and changed mental condition; see Bowden v. People, 12 Hun (N. Y.), 85, where it was held error to charge the jury that they might consider defendant's physique, apparent age, and conduct at the trial, upon an issue of insanity from delirium tremens six months before.

The Alleged Lunatic's Conduct as Evidence of His Insanity.

The law allows a wide scope of evidence of acts tending to show the mental state of the person whose sanity is in question.[1]

Declarations.—His conversations are broadly admissible as evidence of insanity. This does not offend the rule against hearsay evidence, because the conversations are not received to prove the assertions which he made in the course of them, but merely to show by his words his mental state at the time of utterance. And the same rule applies to written declarations.[2] Thus, a testator's verified answer in a previous litigation, setting up weakness, inability to read and write or transact business intelligently, is admissible as tending to show mental condition at the time of the execution of the will.[3]

Taking the view that all acts tending to throw light on the mental condition of the accused are pertinent, the Georgia court permitted an affidavit subscribed by him at a previous term of court to be introduced.[4]

But the rule must not be abused by allowing hearsay proof of extraneous facts to creep in, under the guise of evidence of insane

[1] Flanagan *v.* State, 103 Ga., 619; 30 S. E. R., 550.

[2] Clark *v.* Hill, 69 Mo. App., 541; *In re* Potter's Will, 161 N. Y., 84; 55 N. E. R., 387, reversing 17 App. Div., 267; 45 N. Y. Supp., 563; *In re* Brunor, 21 App. Div., 259; 47 N. Y. Supp., 681; Clark *v.* Hill, 69 Mo. App., 541; Barbour *v.* Moore, 4 App. D. C., 535; Waugh *v.* Moan, 200 Ill., 298; 65 N. E. R., 713. See generally on this subject, the following contested-will cases: Appeal of Vivian, 74 Conn., 257; 50 Atl. R., 797; Ball *v.* Kane, (Del.) 39 Atl. R., 778; Towsen *v.* Moore, 11 App. D. C., 377; Hill *v.* Balrus, 158 Ill., 314, 318, 41 N. E. Rep., 912; Bower *v.* Bower, 142 Ind., 194; 41 N. E. Rep., 523, 525; *In re* Goldthorp, 94 Iowa, 336; 62 N. W. Rep., 845; Manatt *v.* Scott, 106 Iowa, 203; 76 N. W. R., 717; Lane *v.* Moore, 151 Mass., 87; 23 N. E. R., 387; *In re* Merriman, 108 Mich., 454; 66 N. W. R., 372; Moore v. McDonald, 68 Md., 321; 12 Atl. R., 117; Jones *v.* Roberts, 37 Mo. App.. 165; Sheehan *v.* Kearney (Miss.), 35 L. R. A., 102; 21 So. R., 41; Middleditch *v.* Williams. 45 N. J. Eq., 726; 4 L. R. A., 738; 17 Atl. R., 826; Whitman *v.* Morey, 63 N. H., 448; 2 Atl. R., 899; Waterman *v.* Whitney, 11 N. Y., 157; 62 Am. Dec., 71; *In re* Woodward's Will, 167 N. Y., 28; 60 N. E. R., 233; Herster *v.* Herster. 122 Pa. St., 239; 16 Atl. R., 342; Swope *v.* Donnelly, 7 Pa. Dist. R., 448; 21 Pa. Co. Ct. R., 167; Robinson *v.* Robinson, 203 Pa., 400; 53 Atl. R., 253; Peery *v.* Peery, 94 Tenn., 328; 29 S. W. R., 1; Kirkpatrick *v.* Jenkins, 96 Tenn., 85; 33 S. W. R.. 819; McIntosh *v.* Moore, 22 Tex. Civ. App.. 22; 53 S. W. R., 61; Patterson *v.* Lamb, 21 Tex. Civ. App., 512; 52 S. W. R., 98; Bryant *v.* Pierce, 95 Wis., 331; 70 N. W. R., 297; *In re* Loermeeker's Will, 112 Wis., 461: 88 N. W. R., 215.

[3] Manatt *v.* Scott, 106 Iowa, 203; 76 N. W. Rep., 717.

[4] Flanagan *v.* State, 103 Ga., 619; 30 S. E. R., 550.

declarations. Thus, evidence of declarations not inconsistent with mental soundness is rightly excluded when there was no precedent proof of mental disease until three years afterward.[1]

Whole Conversation Admitted.—Where the declarations of the alleged incompetent are proved, it is proper to admit the whole conversation, including the words said by both or all persons present.[2]

In Criminal Cases Accused Must Have Been Cautioned.—Where statements of an accused to an officer are incompetent as admissions because the officer failed to caution him as required by the usual statute, they are also incompetent against him on the issue of his sanity.[3]

Declarations as Proof or Explanation of Facts.—Sometimes the declarations are offered in evidence after the death of a testator, to explain apparently insane actions. Declarations then stand upon a different footing. They must have been made at or about the time of such acts.[4] In cases where undue influence is alleged, if testator's declarations are proved merely to exhibit the quality of his mind, the only evidentiary question is whether they have any probative force. If they tend to prove nothing the court may of course exclude them, but otherwise they are admissible on the same grounds as in any other litigation where mental capacity is in issue.[5] When, however, the declarations are offered to prove the facts stated by the testator as facts, they are not competent except as admissions or declarations against interest.

There is, however, an intermediate category of admissible declarations of a testator—those which tend to prove material facts as to what ideas were operating in his mind at the time. Such are not offered to prove mental capacity. Upon the question of undue influence, however, it may be important to know what were testator's motives, feelings, or designs,[6] or his inclinations toward legatees.[7]

[1] Crossan *v.* Crossan (Mo.), 70 S. W. R., 136.

[2] *In re* Potter's Will, 161 N. Y., 84, 55 N. E. R., 387; State v. Constantine (Wash.), 93 Pac. R., 317.

[3] See article on "Coroners," in this work, vol. i., p. 809. Barth *v.* State, 46 S. W. Rep., 228; 39 Tex. Cr., 384.

[4] Clements *v.* McGinn (Cal.), 33 Pac. R., 920; see Barbour *v.* Moore, 4 App. D. C., 535; Sheehan *v.* Kearney (Miss.), 21 So. R., 41; 35 L. R. A., 102; *In re* Dickson's Est., 20 Pa. Co. Ct. R., 152.

[5] Mallory *v.* Young, 94 Ga., 804; 22 S. E. R., 142; Bryant *v.* Pierce, 95 Wis., 331; 70 N. W. R., 297.

[6] Barbour *v.* Moore, 4 App. D. C., 535; *In re* Munger, 38 Misc. R., 268; 77 N. Y. Supp., 648.

[7] Bush *v.* Delano, 113 Mich., 321; 71 N. W. R., 628.

On these inquiries testator's statements, oral or in letters, may be competent.[1] But care must be taken not to violate the rule against hearsay. The declarations must be kept within the *res gestae* rule, and the evidence must be confined to statements practically contemporaneous with the acts in question. Testator's statement that he was influenced would be hearsay and inadmissible to prove the fact.[2]

Declarations as Admissions.—It would seem quite clear that the usual rule as to admissions, that they may be proved as against the party to an action who made them, does not apply to an admitted or adjudged insane party. The presumption that a person will not make untruthful statements against his own interest presupposes mental capacity to realize what facts are against his interest.[3] Frequently insane persons pretend to confess to the most wicked crimes. Statements of this character are competent evidence on the issue of insanity, however, without much regard to their truth or falsity. For if true, the admitted acts themselves may bear upon the issue, and if false, the statements may bear upon the issue. Thus, the admissions of one that he tortured and killed goslings and turkeys have been allowed to be proved in order to show his attitude toward animal life, as tending to indicate his mental condition.[4]

Illustrations of Competent Evidence as to Conduct.—As we have stated, the scope of the evidence of the alleged incompetent's condition is very broad.[5] A few illustrative cases may make the general character of such evidence clear.

Thus, evidence of a witness who had the defendant in custody, that he had conversations with her, from the time of the arrest to the time of trial, that she was unconcerned, thought she had done right, seemed unconscious of her condition, had no fear of punishment, laughed and sang, has been deemed pertinent.[6]

On the other hand, to rebut the defence of insanity, evidence

[1] Slinglaff *v.* Bruner, 174 Ill., 561, 51 N. E. R., 772; Schieffelin *v.* Schieffelin (Ala.), 28 So. R., 687.

[2] Towson *v.* Moore, 11 App. D. C., 377.

[3] Plaster *v.* Rigney, 97 Fed., 12; 38 C. C. A., 25. After an adjudication as a habitual drunkard, his admissions are not competent against him, because he has been decreed incompetent to manage his own affairs. Ruffner *v.* Luther, 19 Pa. Co. Ct. R., 349.

[4] Hart *v.* Miller, 64 N. E. R., 239 (Ind. App.); *cf.* Waterman *v.* Whitney, 11 N. Y., 157; Redf. on Wills. 3d ed., p. 538.

[5] Flanagan *v.* State, 103 Ga., 619; 30 S. E. R., 550.

[6] Green *v.* State, 64 Ark., 523; 43 S. W. Rep., 973.

has been held proper that the defendant had been, at a time shortly preceding the criminal act, working daily as a carpenter and doing his work with skill.[1]

In the leading Massachusetts case of Commonwealth *v.* Pomeroy,[2] Wells, J., said: "Upon the question of sanity at the time of committing an offence, the acts, conduct, and habits of the prisoner at a subsequent time may be competent as evidence in his favor. But they are not admissible as of course. When admissible at all, it is upon the ground either that they are so connected with or correspond to evidence of disordered or weakened mental condition, preceding the time of the offence, as to strengthen the inference of continuance, and carry it by the time to which the inquiry relates, and thus establish its existence at that time; or else that they are of such a character as of themselves to indicate unsoundness to such a degree or of so permanent a nature as to have required a longer period than the interval for its production or development."

In a case where the defence admitted the commission of the acts charged in the indictment and pleaded insanity, the trial judge nevertheless allowed the prosecution to prove the circumstances of such acts, the prisoner's conduct before and at the time of them, and afterward, and his subsequent statements and confessions. And in charging the jury the court intimated that the State had been allowed to go into these details so that the jury might judge of the defendant's sanity, and so that a basis might be obtained for hypothetical questions to be propounded to the experts.[3]

Justice McLean, of the United States Supreme Court, holding a criminal trial at Circuit,[4] thus charged the jury: "In such cases the important fact to be ascertained is, whether the person charged can discriminate between right and wrong. If he be unable to do this, he is not a proper subject of punishment. And this fact can be best ascertained, not by any medical theory, but by acts of the individual himself. . . .

"The defendant in this case accounted for the amount of money he had in possession by saying he received it as the price

[1] Barnett *v.* State (La.), 39 So. R., 778.

[2] 117 Mass., 143.

[3] United States *v.* Chisholm (U. S. C. Ct. Ala.), 153 Fed., 808.

[4] United States *v.* Shults (U. S. C. Ct. Ohio), 6 McLean, 121. In the United States courts the trial judges are permitted to comment upon the evidence more freely than in some of the State courts.

of a colt. He changed the notes he had for gold and silver, knowing that the notes might not be current at the place to which he might go. Or he might fear that the notes might be identified by those who forwarded them in the mail. On either supposition it showed a sound reflection on the consequence of his acts should he be arrested. He absconded, and was arrested several miles from home, on his way to the West. He was found in a close room of a boat, the door of which was locked; and it is proved that when he came to the boat the previous evening, he engaged the room and requested that the door should not be opened to any one. This shows an apprehension that he would be pursued, and a desire to escape the pursuit.

"These acts would seem to be unmistakable evidence of a sense of guilt, and a desire to escape punishment. . . . Upon the whole, gentlemen, if you think from the evidence in the case that the defendant in violating the mail knew he was doing wrong, and that he was liable to be punished for the act, he is a proper subject for punishment."

Declarations of Third Parties as Evidence.

Admissions.[1]—The admissions of one of several parties interested in sustaining or defeating a will cannot be used against others; therefore the admissions of one such person that a testator was insane are not admissible in evidence in a proceeding to refuse or revoke probate,[2] unless he was the sole individual interested in sustaining or defeating the will,[3] or unless, perhaps, they were made in the presence of the other interested parties.[4]

But where the admissions or declarations are those of the sole beneficiary, and they tend to indicate that the beneficiary admitted mental incapacity, they are competent to prove the allegation.[5]

The admissions may be by conduct as well as by spoken

[1] See *infra*, p. 518, for declarations of the alleged incompetent as bearing upon alleged undue influence.

[2] Roller *v.* Kling (Ind.), 49 N. E. Rep., 948; Whitelaw's Admr. *v.* Whitelaw's Admr., 96 Va., 712; 32 S. E. Rep., 458; Roush *v.* Wensel, 15 Ohio Cir. Ct. R., 133; *In re* Yorke's Est., 6 Pa. Dist. R., 321; Wood *v.* Carpenter, 166 Mo., 465; 66 S. W. Rep., 172.

[3] Egbers *v.* Egbers, 177 Ill., 82; 52 N. E. Rep., 285. In such case they can be used as admissions against interest.

[4] See *In re* Yorke's Est., 6 Pa. Dist. R., 321.

[5] Steele *v.* Helm, 2 Marv., 237 (Del.); 43 Atl. R., 153.

words; for instance, evidence of a suit brought by testator's daughter against her father has been deemed competent as an admission that she regarded him as of sound mind.[1]

Evidence of the Insanity of Relatives.

The question of the extent to which evidence of the insanity of others is admissible to show a hereditary taint has received little discussion.[2] In Michigan evidence of the insanity of a sister and a niece of a testator,[3] and in Arkansas, of a brother of a person accused of crime,[4] and of ancestors (after evidence of defendant's insanity)[5] was held competent on the question of his mental capacity as tending to show the possibility of hereditary taint.

Evidence of this class is necessarily of a corroborative or cumulative character. It has alone no probative force, but when preceded by independent direct proof of irrational acts on the part of the alleged incompetent it aids the inference of insanity.[6]

Thus, there being no other proof tending to show defendant's insanity, evidence of the insanity of his uncle was deemed incompetent, especially where the particular form of the latter's insanity was not shown;[7] and evidence of insanity in the family of a testator has been excluded where there was no evidence of his own insanity.[8] But in Kentucky the very act of parricide without apparent motive was held sufficient evidence of the insanity of the accused to justify the introduction of evidence of insanity of the mother, grandfather, and other near relatives of the accused.[9] And too large a measure of testimony directly tending to show insanity must not first be required.[10]

In Colorado it was held error to instruct the jury that they were to consider evidence as to the insanity of defendant's father

[1] Ketteman *v.* Metzger, 23 Ohio Cir. Ct. R., 61.

[2] See the subject of Heredity in Insanity, this work, vol. iii., p. 164.

[3] Prentis *v.* Bates, 93 Mich., 234; 53 N. W. Rep., 153; Grant, J., dissenting, Morse, C. J., dissenting as to niece.

[4] Shaeffer *v.* State, 61 Ark., 241; 32 S. W. Rep., 679.

[5] Green *v.* State, 64 Ark., 523; 43 S. W. Rep., 973.

[6] State *v.* Christmas, 6 Jones (L.), 471 (N. Car.).

[7] State *v.* Van Tassel, 103 Iowa, 6; 72 N. W. Rep., 497.

[8] Laros *v.* Commonwealth, 84 Pa. St., 200; State *v.* Cunningham, 72 N. C., 469; Bradley *v.* State, 31 Ind., 492; Berry *v.* Safe Dep. & Trust Co. (Md.), 53 Atl. R., 720.

[9] Murphy *v.* Commonwealth, 92 Ky., 185; 8 S. W. R., 163.

[10] See Hagan *v.* State, 5 Baxt. (Tenn.), 615.

and aunt only in case they entertained a reasonable doubt as to defendant's insanity at the time of the homicide.[1]

Insanity of what Relatives Competent Evidence.—Evidence of the insanity of collateral kindred,[2] unless very near,[3] has not been admitted. Evidence of the imbecility of descendants (*e.g.*, grandchildren) has been held insufficient to indicate insanity of the ancestor; it did not appear that the insanity was of a hereditary character, since although another grandchild was also imbecile, the imbecility was directly accounted for by a disease with which the ancestor was not afflicted.[4]

The Insanity of Relatives Must be Proved by Evidence that Would be Competent to Prove Insanity Generally.—Evidence of a non-expert witness that the alleged incompetent's father was a sufferer from paresis, and that he had observed the indications of the disease in the father, and noted the same manifestations in the son, was not admitted in a Vermont case.[5]

The insanity[6] or personal peculiarities[7] of kindred are not to be proved by reputation[6] or tradition[7] in the family.[6]

General Principles as to Evidence of Insanity of Relatives.—To deduce general principles from these decisions: it would seem that where medical science recognizes heredity as a predisposing cause of insanity, the existence of that cause may be shown, actually, by the mental condition of ancestors, and inferentially, by mental unsoundness in near blood relatives. But that, as the mere existence of the predisposing cause does not necessarily determine mental unsoundness in the subject, such evidence alone will not overcome the presumption of sanity. And therefore, if there be no other evidence tending to show mental unsoundness, such evidence may properly be rejected as incompetent, because it is only in connection with other evidence that it can indicate more than a speculative possibility not amounting to proof. Hence, a court in its discretion may first require other evidence tending to show mental unsoundness before admitting evidence of the insanity of blood relatives. And as to

[1] Jones *v.* People, 23 Colo., 276; 47 Pac. R., 275.

[2] State *v.* Soper, 148 Mo., 217; 49 S. W. R., 1007.

[3] Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. R.. 542; 43 W. N. C., 506.

[4] Hawley *v.* Griffin (Iowa), 82 N. W. Rep., 905.

[5] *In re* McCabe, 40 Atl. Rep., 52; 70 Vt., 155; *cf. infra*, p. 547.

[6] Snell *v.* United States, 16 App. D. C., 501.

[7] State *v.* Leuth, 50 Ohio C. C. R., 94.

the degree of relationship essential, since medical science has not fixed the limits within which hereditary taint shows itself, there may be degrees in which the inference of hereditary or atavistic predisposition would be purely speculative and consequently without weight as proof. In remote degrees, therefore, no valid exception could be taken to a refusal to admit evidence of insanity of relatives. In nearer degrees, the admission or exclusion of such testimony would be a matter of judicial discretion.

Collateral Issues Respecting Mental Condition.

At Other Times.—Such evidence is admissible to show its condition at the time in question. For instance, upon a murder trial, evidence of the condition of the mind of the accused, both before and after the homicide, has been admitted as tending to show the condition at the time of the act;[1] and the evidence has been permitted to extend to the condition immediately before and at the time of the trial.[2] So far has evidence of prior and subsequent mental condition been deemed determinative of mental condition in the intervening time, in Pennsylvania, that an instruction was approved which stated that it is contrary to every principle of psychological science that a person should be sane immediately before and after a crime and insane at the time of its commission.[3]

The evidence should relate reasonably to the period of time with respect to which sanity or competency is in dispute;[4] thus, indications of eccentricity or insanity thirty years later than the time under consideration are too remote to prove insanity at the earlier date.[5] But great latitude is allowed, in the discretion of the court,[6] in the time with respect to which testimony may be given; for instance, in one case witnesses were permitted to

[1] State *v.* Newman, 57 Kan., 705; 47 Pac. R., 881.

In Taylor *v.* U. S., 7 App. D. C., 27, evidence of general conversations of the accused on the day of the homicide was excluded, and it was said that evidence of an actuating cause of an alleged insane paroxysm was inadmissible without substantial proof of latent insanity or latent tendency to insane paroxysm.

[2] People *v.* Hoch, 150 N. Y., 291; 44 N. E. Rep., 976.

[3] Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. Rep., 542; 43 W. N. C., 506. But *cf. supra*, Mania Transitoria, p. 261.

[4] Sharp *v.* Merriman (Mich.), 66 N. W. Rep., 372.

[5] Hawley *v.* Griffin (Iowa), 82 N. W. Rep., 905.

[6] *Supra*, p. 503.

relate conditions eight years anterior to the event and two and a half years thereafter;[1] and in another it was held not to be error to permit an expert witness to express his opinion as to the result of an examination into the mental condition of defendant, made seven years prior to the homicide under investigation.[2] Where in a will contest proponent's evidence is permitted to cover a long period of time, contestant's evidence should be permitted to cover the same period.[3] And similarly, in a criminal trial where the evidence of the defence covered a period of ten years prior to a homicide, it was held error to allow the prosecution to cover a period of twenty years, and it was said that evidence of sanity should be confined to the period covered by the defence.[4]

Illustrative Cases.—In New York evidence that defendant was within a year previous to the offence engaged in the enforcement of the excise law, as complainant and witness, and that his acts impressed others as rational, was admitted.[5]

In Delaware evidence of defendant's mental condition several months before a homicide of which he was accused was held admissible under the defence of insanity.[6] And, in Wisconsin, where the condition was continuous, it was error to exclude evidence of defendant's acts, conduct, and declarations several days after the homicide.[7]

Though a marriage is not to be annulled or deemed null when collaterally assailed, on the ground of insanity, unless the insanity existed at the time of the marriage,[8] yet to determine that fact evidence of condition before and after the ceremony is to be considered.[9]

The presumption of the continuance of insanity of a permanent form has an important bearing on the relevancy of proffered testimony of mental condition at an antecedent time.[10] And, conversely, proof of diseased mental condition after the act in ques-

[1] Howes *v.* Colboum, 165 Mass., 385; 43 N. E. Rep., 125.

[2] People *v.* Hoch, 150 N. Y., 291; 44 N. E. Rep., 976.

[3] Petefish *v.* Becker, 176 Ill., 448; 52 N. E. Rep., 71.

[4] Green *v.* State, 27 S. W. Rep., 5; 59 Ark., 246.

[5] People *v.* Koerner, 154 N. Y., 355; 48 N. E. Rep., 730.

[6] State *v.* Harrigan (Del.), 9 Houst., 369; 31 Atl. Rep., 1052.

[7] French *v.* State, 93 Wis., 325; 67 N. W. Rep., 706.

[8] *Supra*, p. 376.

[9] Nonnemacher *v.* Nonnemacher, 159 Pa. St., 634; 28 Atl. Rep., 439.

[10] See *infra*, p. 551, as to presumption of continuance.

tion may, if it be of a substantial character, raise an inference of insanity at the time.[1]

Where one set of witnesses, whose veracity was unimpeached, testified positively that at the time of the execution of a will there was no sign of mental aberration, and physicians testified that upon their examination later in the day testator was incapable of making a will, it was held that the physician's testimony could not be considered as tending to show incompetency at the time of its execution.[2] It would seem, however, that this case is to be regarded as establishing a rule only for its own or very similar circumstances; for, generally speaking, evidence of mental condition at other times is relevant and to be considered as bearing upon, and, in proper cases, as establishing the mental condition at the time of the act in question.

Weight of Evidence.—Of course, remoteness of the time to which the evidence refers weakens its effect. Thus, where the only evidence was of the mental condition of testatrix two years after making the will, that was not deemed sufficient evidence to invalidate the will.[3]

Evidence Tending to Show Another Degree of Mental Incapacity.—Such evidence has been excluded as immaterial; for instance, evidence of lack of sufficient intelligence to travel to a distant town has been excluded as immaterial where the issue was whether deceased, killed on a railroad track, was capable of appreciating the danger of his position on the track.[4]

And in a will contest evidence that a testator was incompetent to transact business at the time of making a will and prior thereto has been regarded as immaterial and inadmissible, on the ground that such mental incompetency is not the standard of testamentary incapacity.[5] But it is apprehended that, inasmuch as the state of mind of the testator is the matter to be determined as a fact in order to apply to it the standard of competency which is the legal measure, it would be improper to exclude evidence

[1] Com. *v.* Pomeroy, 117 Mass., 143.

[2] Lange *v.* Wiegand (Mich.), 85 N. W. Rep., 109; 7 Det. Leg. N., 673.

[3] *In re* King's Will, 29 Misc. R. (N. Y. Surr.), 268; 61 N. Y. Supp., 238.

[4] St. Louis S. W. Ry. Co. *v.* Shiflet (Tex.), 58 S. W. Rep., 945.

In Illinois, where testatrix, in a dispute over her husband's will, had advanced money to settle the claim of one of her children, that fact was held inadmissible as evidence of her incapacity to transact ordinary business. Pooler *v.* Christman, 145 Ill., 405; 34 N. E. Rep., 57.

[5] Brackney *v.* Fogle, 156 Ind., 535; 60 N. E. R., 303.

tending to show mental condition merely because it failed to show a condition amounting to incompetency in the particular case, and that the better rule would exclude opinion evidence as to a degree of competency differing from the legal standard, but would not exclude evidence of facts tending to show the actual mental condition of the testator at the time of the execution of the will. Evidence should not be excluded merely because it is weak or does not prove the whole case at a breath.[1]

Proof of Influences Acting upon the Alleged Incompetent, Tending to Produce Insanity.—When there is precedent proof of a weakened condition of a person's mind, or predisposition to insanity, occurrences to such person, including statements made to him, are admissible as tending to prove insanity; and this is especially true in criminal cases, where the rules against speculative testimony are somewhat relaxed; and especially in those states where a reasonable doubt of insanity requires acquittal.[2] In general, it may be said that the truth or falsity of statements so made is immaterial, upon the question of their admissibility at least.[3]

A frequent example of this class of evidence is afforded by the cases of homicide or attempted homicide following the disclosure of a wrong done to a near relative, as wife or daughter.[4] In such cases it is often maintained as a defence that the knowledge of the wrong caused temporary insanity. Owing to the possibility of the abuse of the defence of insanity in cases of this kind, the courts have been cautious in admitting proof of such disclosures. Where it was sought to show a state of mental excitement caused the night previous to a homicide by the accused discovering improper conduct between his wife and a man—not the deceased—who was in the house with her, and by the insulting language used toward him by that man, the evidence was held too vague to be admitted.[5] In an Indiana case the prisoner,

[1] Evidence Excluded for Weakness.—Evidence of dislike, *In re* Spencer's Est., 96 Cal., 448; 31 Pac. R., 453; evidence of mistakes in arithmetic, Berry *v.* Safe Dep. & Tr. Co. (Md.), 53 Atl. R., 720; evidence of unconcern after the commission of a criminal act, Com. *v.* Pomeroy, 117 Mass., 143.

[2] People *v.* Wood, 126 N. Y., 249; Abbott *v.* Commonwealth, 21 Ky. Law R., 1372; 55 S. W. R., 196; State *v.* Bradley (La.), 45 So. R., 120.

[3] People *v.* Wood, *supra*.

[4] State *v.* Constantine (Wash.), 93 Pac., 317.

[5] State *v.* Graviotte, 22 La. Ann., 587.

accused of the murder of his wife, offered to prove that she had been *for a long time* living in adultery with another man; there was no direct proof of insanity; *held* inadmissible.[1]

As epileptic fits tend to produce insanity, evidence showing that accused suffered from them should be admitted.[2]

Where the defence is an abnormal mental condition incapacitating the accused from forming a design to kill, evidence of the use of intoxicating liquors tending to produce such condition is admissible,[3] as, also, evidence of any other adequate disturbing cause.[3]

But such external influences must have a tendency to cause insanity. The condition of mind of the murdered person is ordinarily utterly immaterial on a prosecution for the murder; evidence of it is, therefore, ordinarily inadmissible;[4] and, likewise, specific acts of violence of deceased toward the accused have been deemed immaterial on the issue of the insanity of the accused.[5]

Evidence on the Border-line of Relevancy.—Evidence to disprove, as well as to prove mental unsoundness must be reasonably pertinent to the particular question at issue, and not merely speculative in its pertinency. For instance, where the defence in a homicide case was insanity, and the supposed motive for the crime was resentment against the murdered woman for taking the side of the wife of the accused against the accused in a dispute which led to a separation of the husband and wife, and the separation was assigned as the cause of the insanity, it was held inadmissible, for the purpose of rebutting this idea, to show how lightly the marriage tie sat on the accused, by evidence that after a divorce from a former wife he had lived with a sporting woman.[6] Of course, the chief objection to this testimony was its highly prejudicial and unfair character.

In Texas it was regarded as permissible to show, on *cross-*

[1] Sawyer *v.* State, 35 Ind., 80; *cf.* Sanchez *v.* People, 22 N. Y., 147.

[2] State *v.* Wright (Iowa), 84 N. W. Rep., 541; *cf.* Guetig *v.* State, 63 Ind., 278; see on the subject of epilepsy, *supra*, p. 445.

[3] Hempton *v.* State, 111 Wis., 127; 86 N. W. R., 596.

[4] State *v.* Punshon, 133 Mo., 44; 34 S. W. Rep., 25.

[5] State *v.* Marshall (Or.), 57 Pac. R., 902.

[6] People *v.* Strait, 148 N. Y., 566; 42 N. E. Rep., 1045.

Evidence that testator did not make out his own tax lists, after executing his will, together with the tax lists themselves, was deemed pertinent in one case. Bower *v.* Bower, 142 Ind., 194; 41 N. E. Rep., 523. In another, evidence of how testatrix acted when her mental condition was mentioned in her presence was admitted. *In re* Fenton's Will (Iowa), 66 N. W. Rep., 99; 97 Iowa, 192.

examination by the State, that a near neighbor had not heard of any insanity of the accused until after the homicide.[1] And in California similar evidence was admitted where the defence was partial insanity and delusions, as tending to show that no such delusions or insanity existed, and also that defendant was sane on other matters than those as to which the evidence might show that he was insane.[2]

Where the alleged incompetency arose from what were claimed to be insane delusions about the dishonesty of neighbors of a testator, evidence was admitted to show their reputation for honesty, as tending to show that testator's assertions were due to an insane delusion.[3]

Privilege Against Evidence of Transactions with Persons Since Become Insane.

The competency of witnesses with respect to transactions with insane persons is now usually a matter of statutory regulation.[4]

Statutes frequently provide in substance that a party cannot testify as to a personal transaction with another party who has become insane, unless the guardian or committee has first testified as to the same transaction, or the testimony of such insane person has theretofore been given in evidence.[5] But usually such statutes do not in any way hinder testimony as to transactions with persons since insane whose estates are not affected by the litigation or who are not parties.[6] Nor do they preclude a mere suppletory oath to identify books and papers, in themselves competent evidence.[7]

[1] Merritt *v.* State, 39 Tex. Cr., 70; 45 S. W. Rep., 21.

[2] People *v.* Hubert, 119 Cal., 216; 51 Pac. Rep., 329.

[3] Titus *v.* Gage, 39 Atl. Rep., 246; 70 Vt., 13.

[4] See the laws of the several States and Territories; Titles: Evidence, Witnesses. See Gamber *v.* Gamber, 24 App. Div. (N. Y.), 446; 48 N. Y. Supp., 501.

[5] *E.g.*, Code W. Va., c. 130, § 23. Iowa Code, § 4604. N. Y. Code Civ. Pro., § 829.

Watters *v.* McGreavy, 82 N. W. Rep., 949; Seott *v.* Bassett, 194 Ill., 602; 62 N. E. R., 914; Edwards *v.* Rives, 17 So. Rep., 416; 35 Fla., 89; Hamilton *v.* Starr (Tex. Civ. App.), 27 S. W. Rep., 587; Trowbridge *v.* Stone's Admr., 42 W. Va., 454; 26 S. E. Rep., 363.

For testimony of physieians upon the mental condition of their patients, see this work, title "Privileged Communieations between Patient and Physieian," vol. i., p. 90.

[6] Elliott *v.* Keith, 102 Ga., 117; 29 S. E. R., 155; in this ease, notwithstanding the incompetent's guardian was a party.

[7] Chapin *v.* Mitchell (Fla.), 32 So. R., 875.

EVIDENCE OF MENTAL CAPACITY TO EXECUTE WILLS.[1]

By Whom Proved.—It is said that the proponent need not prove testator's sanity by all of the subscribing witnesses.[2] But this is a question largely dependent upon the legislative provisions of the several States.

Evidence upon mental competency is not confined to the testimony of the subscribing witnesses of a will.[3]

EVIDENCE OF TESTATOR'S DECLARATIONS AND ACTS.—On the issue of testamentary competency proof of the words and actions of the testator may take a wider range than in cases involving merely the construction and effect of wills. Thus, though his declarations of testamentary intent before and after the execution of the will would not ordinarily be admissible to vary or alter that instrument, they may be proved in an action to invalidate it on the ground of mental incapacity;[4] and his declaration that he did not make the will may also be proved.[5]

The Will Itself as Evidence of Insanity.—The will itself may be considered as evidence bearing upon the sanity of the testator when he made it. A holographic will, clear and apt in language, made in the absence of the beneficiary, so that undue influence[6] cannot be suspected, is deemed in itself very strong evidence of mental capacity.[7] The reasonableness and propriety of the contents of the will may be considered;[8] and in connection with other circumstances tending to prove incapacity, the apparent

[1] *Cf.* the preceding general discussion of Evidence of Insanity.

[2] Kaufman *v.* Caughman, 27 S. E. Rep., 16; 49 S. C., 159.

See *In re* Journeay's Will, 15 App. Div. (N. Y.), 567; 44 N. Y. Supp., 548; interesting in that the witnesses to will and codicil of the testatrix whose competency was attacked were all specialists in the treatment of nervous and mental diseases or alienists.

[3] *In re* Robinson's Will, 190 Ill., 95; 60 N. E. Rep., 194; *q.v.* also for practice on appeal in Illinois, where those resisting probate are limited to the testimony of the subscribing witnesses. Ashworth *v.* McNamee (Colo. App.), 70 Pac. R., 156.

[4] Sheehan *v.* Kearney (Miss.), 21 So. R., 41; 35 L. R. A., 102; Heseman *v.* Vogt, 181 Ill., 400; 55 N. E. R., 151; but see Pyle *v.* Pyle, 158 Ill., 289; 41 N. E. R., 999.

[5] Ball *v.* Kane, 1 Penne. (Del.), 90; 39 Atl. R., 778.

[6] See *infra*, p. 521.

[7] Territory *v.* Padilla, 8 New Mex., 510; 46 Pac. R., 346.

[8] Appeal of Crandall, 63 Conn., 365; 28 Atl. R., 531. It is proper for counsel to argue that the testator's insanity is apparent from the face of the will. Bradley *v.* Palmer, 193 Ill., 15; 61 N. E. R., 856.

injustice of its provisions, in view of evidence of the testator's financial condition.[1]

And to aid in the formation of a just opinion as to the bearing of the will upon the question of sanity, a variety of collateral circumstances may be inquired into. Evidence of the situation in life of the natural objects of testator's bounty has been admitted as tending to throw light upon the reasonableness of the will.[2] It is competent to show why the property was not given to heirs.[3] And where it was contended that antipathy to a brother was not substantially founded, it was held proper to show that the brother had accused testator of robbery and of taking undue advantage of his brothers; though it was not shown that testator had heard of this statement before making his will.[4]

Evidence as to the kindliness or unkindliness of testator's relations with members of his family is admissible upon the reasonableness of its provisions,[5] such as the disinheritance of children,[6] or meagre bequests to testator's wife, from whom testator acquired a large part of his property.[7] It is generally competent to show how the property disposed of was acquired.[8] But such evidence must of course have some pertinency to the issues involved.[9]

Other Evidence of Mental Condition.—The same general principles already discussed[10] apply, of course, to will contests, and in general it may be said that evidence is admissible of testator's appearance, conduct, and habits.[11] For the general purpose of explaining apparently peculiar or eccentric actions, evidence of testator's declarations, at least if made about the time of the actions to be explained, may be proved.[12]

Papers showing a business transaction a few months previous

[1] Sim *v.* Russell, 90 Iowa, 656; 57 N. W. R., 601.

[2] Barbour *v.* Moore, 10 App. D. C., 30.

[3] Patten *v.* Cilley, 67 N. H., 520; 42 Atl. Rep., 47.

[4] Stevens *v.* Leonard, 154 Ind., 67; 56 N. E. R., 27.

[5] *In re* Burns's Will, 121 N. C., 336; 28 S. E. R., 519; Howe *v.* Richards, (Iowa), 83 N. W. R., 909; Manatt *v.* Scott, 106 Iowa, 203; 76 N. W. R., 717.

[6] *In re* Burns's Will, *supra*. But it is immaterial in any case to prove that the beneficiary thinks the provisions of the will unjust. Aylward *v.* Briggs, 145 Mo., 604; 47 S. W. R., 510.

[7] Notwithstanding the widow accepted the provisions of the will. Pergason *v.* Etcherson, 91 Ga., 785; 18 S. E. R., 29.

[8] *In re* Wilson's Estate, 117 Cal., 262; 49 Pac. R., 172.

[9] Whitelaw's Admr. *v.* Whitelaw's Admr., 96 Va., 712; 32 S. E. R., 458.

[10] *Supra*, p. 503.

[11] *In re* Evans's Est. (Iowa), 86 N. W. R., 283.

[12] Clements *v.* McGinn (Cal.), 33 Pac. R., 920.

to making the will, and a receipt given eleven months previously, have been admitted.[1]

Evidence of Capacity to Revoke Wills.—When it is claimed that a will was revoked, and the question of the mental capacity to revoke is in issue,[2] it is apprehended that the principles above stated will be applied, and that declarations of the testator respecting transactions concerning his will and respecting his disposition of his property near the time of the alleged revocation are admissible on the question of capacity to revoke.[3]

Evidence of Similar Wills Made when Sane.—In Texas it was held that evidence that testatrix while unquestionably of sound mind made a similar will was not admissible on the issue of mental capacity to make a subsequent will.[4] But in Kentucky,[5] Missouri,[6] and Illinois[7] the contrary view is taken.

Where a previous will is admitted, for the purpose above stated, it is proper to admit evidence to show that testator was of sound mind when he executed it.[8]

EVIDENCE OF UNDUE INFLUENCE.[9]

By Whom Proved.—The testimony of others than subscribing witnesses is admissible.[10]

Evidence of Testator's or Grantor's Declarations.—The general rules as to admissibility of declarations of one whose sanity is in question, which have been already discussed, apply in some measure when undue influence is alleged.[11] But if the declarations are not offered to show mental susceptibility and weakness,[12] but for some other purpose, certain qualifications are to be noted.

[1] Messner *v.* Elliott, 184 Pa. St., 41; 39 Atl. R., 47. But *cf.* Kelly *v.* Odell (Ill.), 48 N. E. R., 158.

[2] See *supra*, p. 392.

[3] McIntosh *v.* Moore, 22 Tex. Civ. App., 22; 53 S. W. R., 611.

[4] Brown *v.* Mitchell, 26 S. W. Rep., 1059.

[5] Powers' Exr. *v.* Powers, 21 Ky. Law R., 597; 52 S. W. Rep., 845.

[6] McFadin *v.* Catron, 120 Mo., 252; 25 S. W. R., 506.

[7] Heseman *v.* Vogt, 181 Ill., 400; 55 N. E. Rep., 151; Taylor *v.* Pegram, 151 Ill., 106; 37 N. E. Rep., 837. Though in another case in Illinois it was held error to permit a jury to consider on the question of sanity whether the provisions of the will are consistent with previously expressed intentions. Pyle *v.* Pyle, 158 Ill., 289; 41 N. E. Rep., 999.

[8] Heseman *v.* Vogt, 181 Ill., 400; 55 N. E. R., 151.

[9] On the subject of *undue influence* generally, see *supra*, p. 414.

[10] Harp *v.* Parr, 168 Ill., 459; 48 N. E. Rep., 113.

[11] See *supra*, p. 503.

[12] Where they are admissible under the general principle. *In re* Goldthorp's Estate, 94 Iowa, 336; 62 N.

Before the Execution of the Will.—Statements, conversations, or testamentary dispositions[1] of the testator previous to the execution of the will, consistent with the will, are pertinent and admissible to rebut the charge of undue influence.[2] The length of time, previous to the execution, to which the inquiry can go is not limited except in the discretion of the court.[3] But such evidence is to be received with much greater caution, if at all, when offered to prove undue influence. In Illinois it was held that a testator's prior declarations might be shown so far as they tended to show his mental condition at the time of the execution, but not his declarations of the disposition that he intended.[4]

The mere fact that the will is at variance with the testator's expressed intention does not prove undue influence.[5]

Declarations After the Execution of the Will.—Owing to the formalities which the law prescribes for the execution and revocation of a will, statements of a testator contradictory to a will executed and published in conformity with law, are inadmissible to revoke the will or any of its provisions; but, nevertheless, his declarations made shortly after the execution of the will are admissible, to show his intentions, affections, and relations toward beneficiaries and others at the time of its execution.[6] But mere

W. R., 845 (five months previous to execution of will); Hill *v.* Bahrus, 158 Ill., 314; 41 N. E. R., 912; *In re* Ross's Will, 65 Hun, 626; 20 N. Y. Supp., 520 (letters written soon after execution of will admitted to show testatrix's condition of mind); as are external influences affecting mental condition, *In re* Burns's Estate (Tex. Civ. App.), 52 S. W. R., 98.

[1] Kaenders *v.* Montague, 180 Ill., 300; 54 N. E. Rep., 321; *In re* Adams's Estate, 10 Pa. Dist. R., 237; Perkins *v.* Perkins (Iowa), 90 N. W. R., 55.

[2] Hindman *v.* Van Dyke, 153 Pa. St., 243; 25 Atl. Rep., 772; Harp *v.* Parr, 168 Ill., 459; 48 N. E. Rep., 113; Kaufman *v.* Caughman, 49 S. C., 159; 27 S. E. R., 16; *In re* Munger, 38 Misc. R. (N. Y.), 268; 77 N. Y. Supp., 648; Sheehan *v.* Kearney, 21 So. R., 41; 35 L. R. A., 102.

[3] See *supra*, p. 510. Evidence of declarations, consistent with the will, admitted, though considerable time had elapsed: four years, Hindman *v.* Van Dyke, 153 Pa. St., 243; 25 Atl. Rep., 772; seventeen months, Appeal of Gunn, 63 Conn., 254; 27 Atl. Rep., 1113.

In Garland *v.* Smith, 127 Mo., 567; 28 S. W. Rep., 191; 29 S. W. R., 836, declarations of the testator respecting the principal legatee, several years prior to the execution of the will, were held inadmissible. See also Bonnemort *v.* Gill, 165 Mass., 493; 43 N. E. Rep., 299. See also *infra*, p. 523.

[4] Hill *v.* Bahrus, 158 Ill., 314; 41 N. E. Rep., 912. See also *Supra*, p. 505.

[5] *In re* Johnson's Will, 7 Misc. R. (N. Y.), 220; 27 N. Y. Supp., 649.

[6] *In re* Green's Will (Surr.), 20 N. Y. Supp., 538; *In re* Green's Will, 67 Hun (N. Y.), 527; 22 N. Y. Supp., 1112; Kirkpatrick *v.* Jenkins Exrs., (Tenn.), 33 S. W. Rep., 819; Coghill *v.* Kennedy, 24 So. R., 459; 119 Ala., 641; Sheehan *v.* Kearney, 21 So. R., 41; 35 L. R. A., 102.

In Moore *v.* Gubbins, 54 Ill. App., 163, declarations of the testator from two to four days after the execution

expressions of regret at a distant subsequent time,[1] or of an intention to make a new will,[2] are not material on the issue of undue influence. Though when expressions of dissatisfaction were made at such time and under such circumstances as to tend to show a state of mind which was susceptible to undue influence, and other evidence tended to show that undue influence was exercised, they have been admitted.[3]

In general, subsequent declarations in support of the will are admitted, but not contrary declarations offered to show undue influence.[4] Generally speaking, a will cannot be impeached or undue influence shown by the subsequent declarations of the testator;[5] not even by his express declaration that he was unduly influenced.[6]

Many apparently conflicting decisions can be reconciled by the consideration that in cases of alleged undue influence the weakness and susceptibility to influence of the testator's or the grantor's mind are important issues; wherefore any act, declaration, or circumstance which bears upon those issues may be proved.[7] Under this rule statements by testator which would otherwise be excluded as hearsay,[8] or as merged in the written

of the will were admitted to show absence of undue influence.

[1] *In re* Kaufman's Est., 117 Cal., 288; 49 Pac. R., 192.

[2] Manogue *v.* Hewell, 13 App. D. C., 455.

[3] Campbell *v.* Barrera (Tex. Civ. App.), 32 S. W. Rep., 724; *contra* Calkins Est. *v.* Calkins (Cal.), 44 Pac. Rep., 577; 112 Cal., 296.

[4] In Jones *v.* Grogan, 98 Ga., 552; 25 S. E. Rep., 590.

[5] Givin *v.* Givin (Idaho), 48 Pac. R., 295; Underwood *v.* Thurman, 111 Ga., 325; 36 S. E. R., 788; Schierbaum *v.* Schemme, 157 Mo., 1; 57 S. W. R., 562; Earp *v.* Edgington, 107 Tenn., 23; 64 S. W. R., 40. But the fact that testatrix cried when she spoke of contestant in connection with the will has been admitted, to show her feelings toward contestant. Gordon *v.* Burris, 141 Mo., 602; 43 S. W. R., 642. And evidence tending to show testator's feelings toward a beneficiary or contestant is generally admissible. Coghill *v.* Kennedy, 119 Ala., 641; 24 So. R., 459; Oberdorfer *v.* Newberger (Ky.), 67 S. W. R., 267.

[6] Gordon *v.* Burris, 141 Mo., 602; 43 S. W. R., 642.

[7] Cases cited *supra*, p. 503, note 1, 2; also Patten *v.* Cilley, 67 N. H., 520; 42 Atl. R., 47 (evidence that testator was of strong mind and not easily influenced); Robinson *v.* Robinson, 203 Pa. St., 400; 53 Atl. R., 253 (evidence of mental weakness); Olmstead *v.* Webb, 5 App. Div. (N. Y.), 38 (age and physical condition, though not showing incompetency); Perret *v.* Perret, 184 Pa. St., 131; 39 Atl. R., 33 (age, etc.); but see *in re* Logan's Estate, 195 Pa. St., 282; 45 Atl. R., 729 (criticising evidence of old age, forgetfulness, etc., as insufficient to affect the issue of undue influence materially).

[8] *In re* Gregory's Est., 133 Cal., 131; 65 Pac. R., 315; Calkins' Est. *v.* Calkins, 112 Cal., 296; 44 Pac. R., 577; *in re* Metcalf's Est., 16 Misc., 180; 38 N. Y. Supp., 1131; Defoe *v.* Defoe, 144 Mo., 458; 46 S. W. R., 436; Coghill *v.* Kennedy, 119 Ala., 641; 24 So. R., 459; *cf.* Barbour *v.* Moore, 4 App. D. C., 535.

instrument, are admissible, not to establish the particular facts which he may have then asserted, but to exhibit his thoughts and purposes, and the quality of his mind.[1]

Other Evidence of Undue Influence.—If the will was valid at the time of its execution, the subsequent condition of testator's mind or any subsequent undue influence to prevent a revocation could not invalidate it, and in general proof of subsequent conditions and influences is incompetent.[2] But circumstances occurring after the execution of the will or other instrument may be shown, if there is proof to show that such circumstances were a continuation of conditions existing at the time the will was executed.[3] The friendliness of relations among the testator, the beneficiaries, and the testator's relatives are competent to be shown.[4] The contents of the will,[5] and any inequalities or inequities therein,[6] may be considered just as on the issue of competency,[7] as also the value and nature of testator's properties,[8] the condition in life of the persons who are the natural objects of his bounty,[9] and, broadly, all circumstances having real pertinency upon the question of the freedom of his exercise of the testamentary or contractual act.[10]

Undue influence may be proved by circumstantial evidence.[11] There is said to be a presumption against undue influence where the beneficiary is one with whom the testator has maintained intimate and affectionate relations through life.[12]

Illustrative Cases.—The general trend of authority is that evidence of any facts which tend to explain rationally the provisions made by the testator is admissible to rebut the inference of undue influence. For example, the fact that testator's

[1] *E.g.*, not to establish undue influence asserted in them by testator, but to show his state of mind solely. Wood *v.* Zibble (Mich.), 92 N. W. R., 348; 9 Det. Leg. N., 489.

[2] Thompson *v.* Bennett, 194 Ill., 57; 62 N. E. R., 321.

[3] Haines *v.* Hayden, 95 Mich., 332; 54 N. W. R., 911; Walts *v.* Walts (Mich.), 86 N. W. R., 1032; 8 Det. Leg. N., 446.

[4] Denning *v.* Butcher, 91 Iowa, 425; 59 N. W. R., 69; Ketteman *v.* Metzger, 23 Ohio C. C., 61; Betts *v.* Betts, 84 N. W. R., 975.

[5] Appeal of Crandall, 63 Conn., 365; 28 Atl. R., 531.

[6] Henrich *v.* Saier (Mich.), 82 N. W. R., 879; *in re* Worth's Will, 129 N. C., 223; 39 S. E. R., 956.

[7] *Supra*, p. 516.

[8] *In re* Woodward's Will, 167 N. Y., 28; 60 N. E. R., 233.

[9] Barbour *v.* Moore, 10 App. D. C., 30; Manatt *v.* Scott, 106 Iowa, 203; 76 N. W. R., 717.

[10] Blackman *v.* Edsall (Colo. App.), 68 Pac. R., 790.

[11] Campbell *v.* Barrera (Tex. Civ. Ap.), 32 S. W. Rep., 724; Ledwith *v.* Claffy, 18 App. Div., 115; 45 N. Y. Supp., 612.

[12] Harp *v.* Parr, 168 Ill., 459; 48 N. E. Rep., 113.

wife had made a will discriminating against the beneficiary of testator's will and that testator knew it before he made his will, has been deemed admissible; but a similar division of her property after testator made his will, inadmissible.[1] Similarly, the fact that the wife had made a will in favor of testator shortly before his will was executed has been deemed admissible of proof.[2]

Evidence of the embarrassed financial condition of a grantor has been held material in determining his mental condition, where the charge of undue influence was made.[3]

To illustrate the broadness of scope the inquiry may take, in one case in Michigan evidence was admitted of the conduct of proponent and those active in her interest; of the condition of testatrix at the time; of two earlier wills of different purport;[4] and in another case, of the extent to which a testator had aided or failed to aid his next of kin.[5]

Where testatrix recited a religious vow as the reason for a bequest, it was pertinent in support of the will to show that she was not required to take the vow.[6]

Evidence of the exclusion of friends and relatives from testator is admissible,[7] as is also evidence from a sister of testatrix that she never heard testatrix express any affection for proponents and that they bothered her,[8] and evidence that relatives of a wife, the testatrix, would not permit her husband to attend the funeral or see the body.[9]

The evidence must be reasonably pertinent; evidence as to the medicines taken by testator is immaterial, where there is no claim that they affected his will or capacity; also, that his wife, who was charged with undue influence, was insane, where there was no offer to show that such insanity contributed to the influence.[10]

[1] Varner *v.* Varner, 16 Ohio C. C., 386.

[2] Appeal of Vivian, 74 Conn., 257; 50 Atl. R., 797.

[3] Tueker *v.* Roaeh, 139 Ind., 275; 38 N. E. Rep., 822.

[4] Sullivan *v.* Foley, 70 N. W. Rep., 322.

[5] Bush *v.* Delano, 113 Mich., 321; 71 N. W. Rep., 628.

[6] *In re* Will's Est., 67 Minn., 335; 69 N. W. Rep., 1090. See Martin *v.* Bowdem, 158 Mo., 379; 59 S. W. R., 227, bequest to an archbishop for masses, after frequent visits of a priest to testator, not proof of undue influence.

[7] Even after the making of the will, Walts *v.* Walts (Mich.), 86 N. W. R., 1030; 8 Det. Leg. N., 446; Davenport *v.* Johnson (Mass.), 65 N. E. R., 392.

[8] Coghill *v.* Kennedy, 119 Ala., 641; 24 So. R., 459.

[9] *In re* Tibbetts' Est. (Cal.), 69 Pac. R., 978.

[10] Appeal of Vivian, 74 Conn., 257; 50 Atl. R., 797.

Accordingly, it has been held inadmissible to show the penurious character of a person who is charged with using undue influence in favor of another, though he be her son.[1] Evidence is inadmissible that one person who formerly lived in testator's family is in straitened circumstances and a more worthy object of testator's bounty than his actual beneficiary.[2] And testimony tending to show immoral relations between the testator and the beneficiary seven years before the will, is incompetent.[3] But testator's declarations that a person is his child and evidence of his relations to her mother have been deemed pertinent as showing the possibility of a motive for exclusion;[4] as has also evidence that the parents of contestant sued testator;[5] and evidence that property disposed of by the will was given to testator by his sisters, for whom he made no provision.[6]

Evidence of influence exerted sixteen years prior to the execution of the will has been held too remote to prove undue influence, especially in the absence of any evidence that it was continued.[7]

Cases of undue influence almost invariably present their own peculiar facts. The recent cases cited in the subjoined note further illustrate the application of the rules of evidence in cases where undue influence was alleged.[8]

EVIDENCE OF INTOXICATION.

Evidence of intoxication is, of course, inadmissible, unless it is relevant and material. The cases where it is relevant and material as a defence to crime are treated above.[9] As a general

[1] Calkins' Est. *v.* Calkins, 112 Cal., 296; 44 Pac. Rep., 577.

[2] Same. *In re* Kaufman's Est., 49 Pac. R., 192.

[3] Flint's Estate, 100 Cal., 391; 34 Pac. R., 863.

[4] Kirkpatrick *v.* Jenkins, 96 Tenn., 85; 33 S. W. Rep., 819.

[5] Estes *v.* Bridgforth, 114 Ala., 221; 21 So. Rep., 512.

[6] *In re* Ruffino's Est., 116 Cal., 304; 48 Pac. Rep., 127.

[7] *In re* Shell's Est. (Colo.), 63 Pac. R., 413.

[8] Chandler *v.* Jost, 96 Ala., 596; 11 So. R., 636; Bulger *v.* Ross, 98 Ala., 267; 12 So. Rep., 803; *In re* Hobbs, 73 Conn., 462; 47 Atl. Rep., 678; Gurley *v.* Park, 135 Ind., 440; 35 N. E. Rep., 279; Haines *v.* Hayden (Mich.), 54 N. W. Rep., 911; Boisaubin *v.* Boisaubin, 51 N. J. Eq., 252; 27 Atl. R., 624; Ramsdell *v.* Streeter (N. J. Pre.), 48 Atl. R., 575; Barkman *v.* Richards (N. J. Pre.), 49 Atl. R., 831; Chambers *v.* Chambers (N. Y.), 61 App. Div., 299; 70 Supp., 483; Trezevant *v.* Rains (Tex. Civ. Ap.), 25 S. W. R., 1092.

[9] *Supra*, p. 481.

rule, it is material in determining the intent, and thereby fixing the existence or the grade of the crime charged.[1]

Evidence of frequent intoxication of a person accused of homicide and of his condition at such times, and that he *had been drinking* on the day of the homicide, is not sufficient evidence of his intoxication on that day to call for an instruction to the jury upon the legal effect of intoxication;[2] and evidence of intoxication four or five hours before an attempted rape had been excluded.[3] But evidence of intoxication within an hour before a homicide, and that accused drank twice in the interval, has been deemed sufficient evidence of intoxication at the time of the offence to call for an instruction on the legal effect of intoxication.[4]

In New York evidence of intoxication of the defendant a few days before a crime and leading up to the day of its commission was admitted as bearing on his condition that day.[5]

These cases show that the defence of intoxication requires distinct proof.

Where intoxication is permitted to lower the grade of a crime, and defendant was intoxicated at the time of its commission, evidence is admissible to show the effect generally of intoxicants on the accused.[6] And where the use of the intoxicant is sufficiently near in point of time to justify the inference of intoxication at the time of the action in question, it is error to exclude evidence of its use, though it be only a mild intoxicant.[7]

Where drunkenness is itself a crime, as in Michigan, it is said that one is a drunkard with whom drunkenness has become a habit; evidence tending to show the habit is admissible; accordingly it was deemed proper to show that defendant had formerly pleaded guilty to similar charges.[8]

[1] *Supra*, p. 488; but *cf.* People *v.* Miller, 114 Cal., 10; 45 Pac. R., 986. See also People *v.* Gilmore, 53 Pac. Rep., 806.

[2] People *v.* Kloss, 115 Cal., 567; 47 Pac. Rep., 459; see also Com. *v.* Cloonen, 191 Pa. St., 605; 25 Atl. R., 145; Wright *v.* State, 37 Tex. Cr. App., 627; 40 S. W. Rep., 491.

[3] State *v.* Alcom, 137 Mo., 121; 38 S. W. Rep., 548.

[4] People *v.* Hill, 123 Cal., 47; 55 Pac. R., 692.

[5] People *v.* Gaynor, 33 App. Div. (N. Y.), 98; 53 N. Y. Supp., 86.

[6] State *v.* Faino, 2 Hardesty, 153 (Del.).

[7] Mage *v.* State, 60 S. W. Rep., 55 (cherry bitters).

[8] People *v.* Radley, 8 Det. Leg. N., 467; 86 N. W. Rep., 1029.

ADJUDICATIONS OF INSANITY AS EVIDENCE.

When evidence of an adjudication of sanity or insanity is offered to prove mental condition, questions arise as to its competency, and if it be admissible, as to its effect, whether conclusive or merely *prima facie* proof.[1]

The relevancy of such evidence depends in a given case partly upon the similarity of the issue of insanity adjudicated, with respect to the particular phase of incompetency that was in question, and partly upon the remoteness of the time of the adjudication. If the previous inquiry found incompetency of the very kind and in respect to the very same capacities now again in controversy, the prior adjudication may be both admissible and conclusive.[2] This is the case when there has been an adjudication of incompetency to transact the ordinary affairs of life, and a committee has been appointed. Thereafter the incompetent is, by force of the adjudication as evidence, conclusively proved incapable of transacting such ordinary affairs of life as the making of contracts of sale, and the like.[3]

But an adjudication of incapacity to do one thing may have little or no bearing on the question of competency to do another thing. If it related to a different sort of transaction or a different degree or kind of alienism, it may be of such speculative import upon the new inquiry as to be deemed wholly incompetent, or it may be admissible though inconclusive.[4]

Likewise, if the former adjudication was of insanity at a different time, especially at a subsequent time, it may be inadmissible, even though the evidence on which it was based would be pertinent on the new inquiry also.[5] For an adjudication, like

[1] As to the competency and effect of such adjudications upon the questions of competency and credibility of witnesses, see *supra*, p. 422.

[2] As in O'Reilly *v.* Sweeney, 54 Misc., 408; 105 N. Y. Supp., 1033; Foran *v.* Healy (Kan.), 85 Pac. R., 751; and Soules *v.* Robinson (Ind.), 62 N. E. R., 999.

[3] Last note; see *supra*, p. 369.

[4] Thus, adjudication of incompetency with appointment of a guardian is conclusive only against incapacity to contract and the like; not conclusive, though *prima facie* evidence against testamentary capacity. Ames *v.* Ames (Ore.), 67 Pac. R., 737; see also *in re* Johnson, 57 Cal., 529; Harrison *v.* Bishop, 131 Ind., 161; 30 N. E. R., 1069; Linkmeyer *v.* Brandt, 107 Iowa, 750; 77 N. W. R., 493; Rice *v.* Rice, 50 Mich., 448; 15 N. W. R., 545; Brady *v.* McBride, 39 N. J. Eq., 495; Williams *v.* Robinson, 39 Vt., 267; *in re* Fenton's Will, 97 Iowa, 192; 66 N. W. R., 99.

[5] State *v.* Smith, 26 Wash., 354; 67 Pac. R., 70; subsequent time, Small *v.* Champeny, 102 Wis., 61; 78 N. W. R., 407; facts on which ad-

any judgment, is not conclusive of all the facts on which it may have been based; only of the fact that the incompetent was, at a certain time or times specified, and with reference to certain things specified, without mental capacity.

When an adjudication of insanity has been made, however, if by a court of competent jurisdiction,[1] the precise facts determined upon that adjudication, and also the validity of the adjudication, cannot be collaterally impeached. The adjudication can be revoked only in a direct proceeding for that purpose.[2]

Previous Adjudications as Evidence in Prosecutions for Crime.—In general, an adjudication as to sanity is not competent evidence against a defendant in a subsequent prosecution for crime. Thus, a record on proceedings to ascertain whether a person is a proper subject to be admitted to an asylum for the insane, wherein he was found sane and feigning lunacy, is inadmissible to rebut evidence of insanity offered as a defence to an indictment for larceny.[3] And conversely it was held that an order of commissioners of insanity that a person was a fit subject for treatment in a hospital for the insane is neither *prima facie* nor conclusive evidence in his behalf that he was insane, on a prosecution for crime.[4] But undoubtedly a previous adjudication of insanity is *some* evidence for the accused where the defence is, not guilty by reason of insanity. In Kansas where a person was duly adjudged insane in direct proceedings and ordered to be confined and was subsequently discharged, but not restored to his right mind, the adjudication and the record thereof were admitted in evidence on the issue of insanity upon an information for crime more than seven years afterward.[5]

In Wisconsin, on the separate trial permitted in that State of the issue of insanity, one accused of crime was found to have been sane at the time of the commission of the act charged; this was held not to preclude proof, on the trial of the issue of guilt,

judication based also admissible, Hempton *v.* State, 111 Wis., 127; 86 N. W. R., 596.

[1] McGee *v.* Hayes, 127 Cal., 336; 59 Pac. R., 767.

[2] Isaacs *v.* Jones, 121 Cal., 257; 53 Pac. R., 793; Soules *v.* Robinson (Ind.), 62 N. E. R., 999; *in re* Hoope's Est., 174 Pa. St., 373; 34 Atl. R., 603.

[3] Naanes *v.* State, 143 Ind., 299; 42 N. E. R., 609; *cf.* People *v.* Ward, 105 Cal., 335; 38 Pac. R., 945.

[4] Pflueger *v.* State, 46 Neb., 493; 64 N. W. R., 1094; *cf.* Hempton *v.* State, 111 Wis., 127; 86 N. W. R., 596.

[5] State *v.* McMurry, 61 Kan., 87; 58 Pac. R., 961.

tending to show that his mental condition was such as to make him incapable of forming the specific intent, which was an essential element of the crime charged. Incapacity to form such intent might exist consistently with the sanity found.[1]

Illustrations of Previous Adjudications as Evidence.—In a suit attacking an exchange on the ground of insanity the record of an inquisition of lunacy had twenty days after the exchange and adjudicating insanity was held not admissible.[2] But in another civil action it was held merely that after the discharge of a patient from an asylum the adjudication of insanity upon which he was committed does not create a conclusive presumption of the continuance of his insanity.[3] And likewise, in a will contest, an adjudication of restoration to sanity in proceedings to set aside a guardianship was said not to be conclusive evidence of continued mental capacity to the date of its entry.[4]

In a suit by a guardian to annul the marriage of his insane ward, also, evidence that a probate court had found that he had been restored to sanity is not conclusive on an issue whether he ever had mental capacity to ratify the marriage.[5]

Adjudication of Insanity as Evidence Against Third Parties.—In Texas a judgment of Maine adjudging a person a lunatic and appointing a guardian of his property was admitted in evidence against a stranger in a suit over the lunatic's title to land in Texas; the appointment of the guardian was deemed only an incident, and the adjudication of mental condition the substance of the adjudication; and it was there said that at common law a judgment declaring a person *non compos mentis* and appointing a guardian is, as against strangers, *prima facie* evidence of such mental unsoundness; as being the adjudication of a status, analogous to a judgment *in rem*, though not conclusive like a judgment *in rem*.[6]

In Texas it was held that a judgment of insanity is only *prima facie* evidence of insanity as to third persons, and therefore a grantee by deed from a person adjudicated insane, his deed having been delivered, pending an appeal from the adjudication,

[1] Hempton *v.* State, 111 Wis., 127; 86 N. W. Rep., 596.

[2] Rhoades *v.* Fuller, 40 S. W. Rep., 760.

[3] Mutual Life Ins. Co. *v.* Wiswell, 56 Kan., 765; 44 Pac. Rep., 996.

[4] *In re* Fenton's Will, 97 Iowa, 192; 66 N. W. Rep., 99.

[5] Goodhart *v.* Speer, 7 Ohio Dec., 47.

[6] Herndon *v.* Vick, 18 Tex. Civ. App., 583; 45 S. W. Rep., 852.

was not precluded upon affirmance of the adjudication from offering evidence of the sanity of his grantor at the time of the execution of the deed.[1]

In Pennsylvania a third party, affected by a finding of lunacy, is permitted to contest the finding; where the alleged lunatic died pending the trial of issue raised by the traverse by the third party, the traverse was quashed, and it was held that the decree confirming the finding of lunacy would be *prima facie* evidence against the third party.[2] But in New York it has been held in accordance with the statute that an adjudication of insanity is conclusive evidence of incapacity to make any contract, including a promise of marriage.[3] The Court of Appeals said in Banker *v.* Banker[4] speaking of lunacy proceedings: "These proceedings have been likened to proceedings *in rem*, which are conclusive on all the world and all are bound to take notice of them. Actual notice is not necessary and whether given or not is not material. The inquisition is conclusive against subsequent acts and dealings and presumptive against prior ones." Hence, the finding of an inquisition two days after a marriage that the husband is of unsound mind, and that he has been so for six months, is, in an action to annul a marriage, presumptive evidence of incapacity at the time of the marriage. The fact that a wife had notice of the proceedings does not affect the question.

The principle on which adjudications of lunacy are admissible in evidence against third parties seems to be that they belong to the class of determinations by competent public authority with respect to matters of public interest lying within the scope of the duty of such authority. The public interest depends upon the fact that lunatics, like minors and others more or less under disabilities, are regarded as wards of the State.[5]

[1] Grimes *v.* Shaw, 2 Tex. Civ. App., 20; 21 S. W. Rep., 718. *Accord:* Slaughter *v.* Heath, 127 Ga., 747; 57 S. E., 69. See Wigmore on Evidence, vol. 2, § 1671.

[2] *In re* Gensemer's Est., 170 Pa. St., 96; 32 Atl. Rep., 561; see also *in re* Sampson, 19 Pa. Co. Ct. Rep., 1; 5 Pa. Dist. R., 717 (finding of habitual intemperance).

[3] Banker *v.* Banker, 63 N. Y., 409; Van Dusen *v.* Sweet, 51 N. Y., 378. *Cf.* Sharbero *v.* Miller, 65 Atl., 472 (N. J. Ch.); O'Reilly *v.* Sweeney, 54 Misc., 408; 105 Supp., 1033.

[4] 63 N. Y., 413. See also Carter *v* Beckwith, 128 N. Y., 316; Hart *v.* Demaer, 6 Wend., 497; Osterhout *v.* Shoemaker, 3 Hill, 513; Hughes *v.* Jones, 116 N. Y., 67.

[5] See Wigmore on Evidence, vol. 2, §1671 *et passim.*

OPINIONS OF EXPERT AND NON-EXPERT WITNESSES.

A definition of expert and non-expert testimony has already been given,[1] so it is not necessary to repeat it here.

Generally, witnesses must testify to facts within their own knowledge and not to opinions, conclusions, or inferences. To draw conclusions or inferences is the province of the court or jury, except in cases where expert testimony is allowed.

Under the Roman law experts were permitted to inform the judex or judge as to physical laws or phenomena.[2] And it was allowed in France from about 1532.[3] In England, on the appeal of Mayhew, the accused prayed that the court would see the wound to ascertain if there had been a maiming. The court, because the wound was new, did not know how to adjudge, and the accused asked that the wound be examined by surgeons, which was done.[4]

EXPERT WITNESSES.

Testimony upon Hypothetical Questions.

In all cases in which insanity,[5] in any of its various forms, comes into question, the courts allow physicians or alienists to give their opinions, before the trial jury, as to the *sanity* of the alleged insane person, but not as to his *responsibility*, for that is deemed a question of law.[6] This opinion is, according to the usual rule of practice, given in answer to a *hypothetical question* embracing substantially all the evidence in the case relating to that subject.[7]

[1] Chap. V, p. 49 *et seq.* of vol. i., where will be found general rules relating to expert evidence.

[2] L. 8, § 1, xi.; L. 3, § 4, xi., 6.

[3] 2 Beck's "Med. Juris.," 896.

[4] 28 Ass. pl., 5; 9 H. 7, 16; 7 H. 6, 11; Buckly *v.* Rice, Plow., 125.

[5] But *drunkenness* (when not dipsomania) is not properly the subject of expert testimony; it may be proved by observation. People *v.* Martin, 15 Misc., 6; 36 N. Y. Supp., 437. And while the general effect of a drug on the mental faculties is the subject of expert testimony, it has been held that its effect upon the *veracity* of a *witness* is not a matter for expert opinion. State *v.* Robinson, 12 Wash., 491; 41 Pac. R., 884.

[6] People *v.* Tuczkewitz, 149 N. Y., 240; 43 N. E. Rep., 548. *Cf.* Lindsay *v.* White (Tex. Civ. App.), 61 S. W. R., 438.

[7] Green *v.* State, 64 Ark., 523; 43 S. W. Rep., 973. Even when the defence has not produced witnesses who testify that the accused was insane at the time of the homicide, if there has been evidence tending to show that he had an affection of the brain, Jordan *v.* People (Col.), 36 Pac. Rep., 218. But the hypothetical question cannot be based upon the theory of the existence of conditions

The hypothetical question need not embrace all the evidence on the subject; each side may submit a different hypothetical case, based on the hypothesis of facts which it deems proved.[1] And either party has the right to assume for the purposes of the questions that the evidence tending to support its theory is true.[2] It is proper, however, for the court to see that it embodies all the material facts bearing on the issue,[3] but there is no error in allowing an answer to a hypothetical question, embracing such of the facts in evidence bearing upon insanity as one party deems proper, though it does not embrace all the facts in evidence, provided the opposite party be given full opportunity to cross-examine,[4] and especially if these facts were supplied on cross-examination. But where the hypothetical question embraced evidence of previous habits which might tend to produce insanity, it was not admissible in the absence of other independent evidence tending to show insanity,[5] and a question which would not admit of a conclusion indicating incapacity, it has been said, is improperly submitted,[6] though it would seem that a question is

of which there is no evidence, People *v.* Tuczkewitz, 149 N. Y., 240; 43 N. E. Rep., 548; Safe Dep. and T. Co. *v.* Berry, 49 Atl. R., 401 (Md.); Sharkey *v.* State, 2 O. C. D., 443; or upon hearsay testimony, Safe D. and T. Co. *v.* Berry (Md.), 49 Atl. R., 401; and the proper course of defendant's counsel, if they think any evidence in his favor has been omitted from the hypothetical question, is not to rely upon an objection, but to propose a question containing the facts claimed by them to have been omitted, Shirley *v.* State, 37 Tex. Cr. App., 475; 36 S. W. Rep., 267; Horton *v.* United States, 15 App. D. C., 310.

[1] Burt *v.* State, 38 Tex. Cr. App., 397; 43 S. W. Rep., 344; 39 L. R. A., 305. See Shirley *v.* State, Note 7, *supra*. The following cases illustrate the law with respect to the form of the question: It may be based upon all of the testimony, except expert opinion evidence, respecting insanity, though it be elicited from many witnesses, if not contradictory, Cornell *v.* State, 104 Wis., 527; 80 N. W. Rep., 745. It need not embrace all the elements of insanity, but may limit the inquiry to the degree of intelligence of the defendant under the circumstances of the act under investigation, State *v.* Peel, 23 Mont., 358; 59 Pac. R., 169. It cannot assume the fact to be proved by the answer, such, for instance, as the existence of an insane delusion; or express a fact assumed in a word which may include the fact to be proved by the answer; for instance, a "misconception," which may include "an insane delusion," Safe Dep. and T. Co. *v.* Berry (Md.), 49 Atl. R., 401. It should be sufficiently explicit to warrant the formation of an opinion, *ibid.* It should not assume that weak mental condition is a necessary result of weak physical condition, *ibid.*

[2] State *v.* Peel, *supra*.

[3] Williams *v.* State (Tex. Cr. App.), 53 S. W. Rep., 859. See also Squires *v.* State (Tex. Cr. App.), 54 S. W. Rep., 770.

[4] State *v.* Wood (Iowa), 84 N. W. Rep., 520; see State *v.* Wright (Iowa), 84 N. W. Rep., 541.

[5] Bishop *v.* Commonwealth, 22 Ky. Law, 760; 58 S. W. Rep., 817; 22 Ky. Law, 1161; 60 S. W. Rep., 190.

[6] Safe Deposit and T. Co. *v.* Berry (Md.), 49 Atl. R., 401.

not necessarily objectionable because it would not support one of two opposite opinions which might be based on it. It should not by omission of part of the proof with respect to the facts assumed improperly color the fact assumed.[1]

Testimony upon Their Knowledge of the Facts.

Experts may also give an opinion, not based on a hypothetical question or an assumed statement of facts, but derived from repeated personal examinations of defendant,[2] or from personal observation during the trial, where proof of defendant's manner, appearance, and demeanor during the trial has been offered in his behalf as evidence of his insanity.[3] Any physician may testify from personal acquaintance and observation, even though not professing to be expert in mental disease, provided in his practice as physician he has had a fair number of such cases, and is reasonably expert.[4]

An attending physician may give an opinion as to the sanity of an alleged insane person.[5] Such evidence is subject, how-

[1] Safe D. & T. Co. *v.* Berry, *supra.*

[2] People *v.* Taylor, 138 N. Y., 398; 405; Com. *v.* Buccieri, 153 Pa. St., 535; 26 Atl., 228; Conn. M. L. Ins. Co. *v.* Lathrop, 111 U. S., 612; Dexter *v.* Hall, 15 Wall. (U. S.), 9; Fairchild *v.* Bascomb, 35 Vt., 398; 408; Tullis *v.* Kidd, 12 Ala., 648; Grant *v.* Thompson, 4 Conn., 203; 10 Am. Dec., 119; Rambler *v.* Tryon, 7 S. and R. (Pa.), 90; 10 Am. Dec., 444; State *v.* Feltes, 51 Iowa, 495; McLeod *v.* State, 31 Tex. Cr. R., 331; 20 S. W. R., 749; Dejarnette *v.* Com., 75 Va., 867; U. S. *v.* Guiteau, 3 Crim. Law Mag., 347; State *v.* Barber, 74 Mo., 292; Jordan *v.* People, 19 Col., 417; 36 Pac., 218; People *v.* Hall, 48 Mich., 482; State *v.* Leehman, 2 S. D., 171; 49 N. W. R., 3; People *v.* Schuyler, 106 N. Y., 298; Quaife *v.* Chi., etc., R. Co., 48 Wis., 513; Matter of Blakely will, 48 Wis., 294; Goodwin *v.* State, 96 Ind., 550; Coryell *v.* Stone, 62 Ind., 307; Davis *v.* State, 35 Ind., 496; Boardman *v.* Woodman, 47 N. H., 120; Buswell on "Insanity," § 250; Matter of Snelling, 136 N. Y., 515; 49 N. Y. St. R., 695; Reynolds *v.* Robinson, 64 N. Y., 589; People *v.* McElvaine, 121 N. Y., 250; People *v.* Smiler, 125 N. Y., 717; 26 N. E. R., 812; Link *v.* Sheldon, 136 N. Y., 1; Murphy *v.* Com., 92 Ky., 485; 18 S. W. Rep., 163; People *v.* Worthington, 105 Cal., 166; 38 Pac. R., 689; State *v.* Crisp (Mo. Sup.), 29 S. W. Rep., 699; Crockett *v.* Davis (Md.), 31 Atl. Rep., 710, 81 Md., 134; State *v.* Wright, 35 S. W. R. (Mo.), 1145.

[3] Burt *v.* State, 40 S. W. Rep., 1000, 38 Tex. Cr. App., 397.

[4] Phelps *v.* Commonwealth, 17 Ky. Law R., 706; 32 S. W. Rep., 470; *In re* Dolbeer's Estate, 86 Pac. (Cal.), 695; Davis *v.* State, 35 Ind., 497; 9 Am. Rep., 760; 12 "Am. and Eng. Enc. of Law" (2d ed.), 452.

[5] Hastings *v.* Rider, 99 Mass., 622; Townsend *v.* Pepperell, 99 Mass., 40; Phelps *v.* Hartwell, 1 Mass., 71; Poole *v.* Richardson, 3 Mass., 330; Needham *v.* Ide, 5 Pick. (Mass.), 510; Com. *v.* Wilson, 1 Gray, 337; Com. *v.* Fairbanks, 2 Allen (Mass.), 511; Cowles *v.* Merchants, 140 Mass., 377; May *v.* Bradlee, 127 Mass., 414; Com. *v.* Brayman, 136 Mass., 438; Baxter *v.* Abbott, 7 Gray (Mass.), 71; Wyman *v.* Gould,

ever, to being excluded as privileged.[1] Observations of a prisoner by an expert are not confessions,[2] therefore such observations of the prisoner's conduct may be used by an expert witness as the basis of his opinion, though the prisoner was not warned that they might be used against him.[3]

The courts differ whether it must first be shown on what particular facts an expert, testifying from his own knowledge of a person, bases his opinion, and whether he can be asked his opinion, based generally upon what he has seen and known of the accused.[4]

In New York it was held that a physician could not express an opinion based upon something the accused said to him which was not in evidence.[5] But where the statements of the accused as to his previous sufferings are declared by his physician to have been necessary to his diagnosis of the case, the physician when testifying as an expert may repeat the statements as the basis of his opinion.[6] In Missouri an opinion based upon representations of the accused as to his previous history has been deemed inadmissible.[7] The jury are entitled to the facts upon which the opinion is based, and on that ground statements of the accused to his physician are admissible in connection with the physician's opinion when he testifies as an expert.[8] Where a wit-

47 Me., 159; Heald *v.* Thing, 45 Me., 392; Kearney *v.* State, 68 Miss., 238; 8 So. R., 292; Inhabitants of Fayette *v.* Chesterville, 77 Me., 28; 52 Am. Rep., 741; Gehrke *v.* State, 13 Texas, 568; Hickman *v.* State, 38 Tex., 190; State *v.* Geddis, 42 Iowa, 268; Reed *v.* State, 62 Miss., 405; O'Brien *v.* People, 36 N. Y., 276; Real *v.* People, 42 N. Y., 270; St. Louis, etc., Ry. Co. *v.* Bradley, 13 U. S. App., 68; People *v.* Worthington, 105 Cal., 166; 38 Pac. Rep., 689. In Prentis *v.* Bates, 93 Mich., 234, 53 N. W. Rep., 153, the opinion of a physician, a superintendent of an insane asylum, was held not competent, where it was based only upon the record of the case of an inmate before he was superintendent, and it did not appear that he had any knowledge of the method of keeping records at that time.

[1] See this subject fully discussed in vol. i., p. 90 *et seq.*, of this work.

[2] See *infra*, p. 545.

[3] Burt *v.* State (Tex. Cr. App.), 40 S. W. Rep., 1000.

[4] Flanagan *v.* State, 32 S. E. R., 80; 106 Ga., 109; Raub *v.* Carpenter, 187 U. S., 159; *contra* Jones *v.* Collins, 94 Md., 403; 51 Atl. Rep., 398, where it was said a physician may give his opinion as to mental capacity of testator without first stating the circumstances on which it was founded, and though he had never attended testator professionally except to prescribe for him on two occasions. *Cf.* Regina *v.* Cooper, Norwich Assizes, 1887 (Eng.), cited in J. Dixon Mann, "Forensic Med.," etc., Phila., 1893, p. 356, where expert testimony upon conversations with accused was rejected.

[5] People *v.* Stratt, 148 N. Y., 566; 42 N. E. Rep., 1045.

[6] People *v.* Shattuck, 109 Cal., 673; 42 Pac. Rep., 315. *Cf.* People *v.* Fogelsong (Mich.), 74 N. W. Rep., 730.

[7] State *v.* Soper, 49 S. W. Rep., 1007; 148 Mo., 217.

[8] People *v.* Nino, 149 N. Y., 317; 43 N. E. Rep., 853.

ness, a qualified expert, states facts within his knowledge, and competent as evidence, he may express his opinion as to the sanity of the accused, based on the facts stated, even though the opinion be that the accused was simulating a fit or shamming unconsciousness.[1]

Who May Qualify as an Expert Witness.

In a Pennsylvania case a reputable physician of over twenty years' experience, who saw defendant about an hour after the homicide at the station house and treated his arm which had been injured, was held to be competent to testify that there were no indications of a recent epileptic convulsion, and that if there had been one within two or three hours he did not think it possible that he would not then have seen some evidence of it. It was also held that where a physician was called as an expert as to the effect of epilepsy on the memory, and to show that there had not been such an impairment of defendant's mind as indicated epileptic insanity, it was proper to allow him to illustrate the soundness of defendant's memory by speaking of the quickness with which he understood and answered questions put to him on the stand.[2]

In California it was held that a Roman Catholic priest who is required by his priestly office to pass upon the sanity and mental condition of invalids and dying persons under his charge, to the end that he may administer the sacrament only to those whose minds are in a proper state to reason or act of their own volition, is in this respect an expert, and may answer a hypothetical question touching the sanity of such individual.[3]

But generally a person who has no medical knowledge is not competent as an expert,[4] such, for instance, as a sheriff who has had experience with insane prisoners,[5] or a minister who has read books upon moral and intellectual science,[6] or a chaplain in an insane asylum.[7]

[1] People *v.* Koerner, 154 N. Y., 355; 48 N. E. Rep., 730.

[2] Com. *v.* Buccieri, 153 Pa. St., 535; 26 Atl., 228.

[3] Estate of Toomes, 54 Cal., 509; 35 Am. Rep., 83.

[4] State *v.* Crisp, 29 S. W. Rep., 699; 126 Mo., 605.

[5] Hurst *v.* State (Tex. Cr. App.), 40 S. W. Rep., 264.

[6] Burt *v.* State, 40 S. W. Rep., 1000; 38 Tex. Cr. App., 397.

[7] Ledwith *v.* Claffy, 18 App. Div. (N. Y.), 115; 45 N. Y. Supp., 612.

In Pennsylvania, however, the warden of a prison for thirty-eight years, who had had in charge many prisoners who had feigned insanity, was deemed an expert competent to testify whether a person feigned insanity.[1]

Not every physician is qualified as an expert on insanity; he must have had sufficient acquaintance with the subject, either from personal experience or from reading or studying the subject of diseases of the mind,[2] to satisfy the court that he is competent therefrom to testify as an expert. If he meets that requirement, the character and amount and source of his learning or experience bear upon his credibility.[2]

But where the physician fails to show himself sufficiently familiar, from either experience or reading or study, with the subject, to satisfy the court that he is competent to answer a hypothetical question addressed to him, it is proper for the court to reject his testimony;[2] for instance, where it does not appear that he has ever treated an insane person.[3] The witness's modest disclaimer that he is not an expert will not deprive his testimony of its character as expert testimony if it actually appears that he is qualified as an expert witness.[4]

The Effect of Expert Testimony.

The testimony of experts, particularly so-called alienists, has become a bone of contention. Of right it ought to be a valued adjunct to the enforcement of justice. In Massachusetts *only* an expert alienist is permitted to give his opinion, and he need not have seen the defendant. Opinions of lay witnesses are not received.[5] In any jurisdiction the honestly formed opinion of a veritable expert, who is able intelligently to defend his opinion upon cross-examination, ought to be, and is, despite a popular notion to the contrary, given weight by courts and juries.

Expert evidence is not controlling, and may be overcome by other competent evidence.[6] On the other hand, where the jury

[1] Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. Rep., 542; 43 W. N. C., 506.

[2] Abbott *v.* Commonwealth, 21 Ky. Law R., 1372; 55 S. W. Rep., 196.

[3] Bishop *v.* Commonwealth, 22 Ky. Law Rep., 760; 58 S. W. Rep., 817; 22 Ky. Law Rep., 1161; 60 S. W. Rep., 190.

[4] Horton *v.* United States, 15 App. D. C., 310; State *v.* Boyce, 24 Wash., 514; 64 Pac. R., 719.

[5] Com. *v.* Rogers, 7 Met. (Mass.), 500; 4 Am. Dec., 458; Com. *v.* Rich, 14 Gray, 335.

[6] *E.g.*, *In re* McKean's Will, 31 Misc. R. (N. Y.), 703; 66 N. Y. Supp., 44; Wilsey *v.* Ellis, 89 Ill. App., 632, where physician, witness to a will, testified against mental competency,

determine by their verdict that the accused is guilty, expert evidence of sanity may sustain the verdict, though the remaining testimony tends to show insanity.[1]

Expert opinion evidence, based solely on hypothetical questions, is entitled to greater or less weight according as the facts assumed in the questions may have been established by the testimony.[2] And where such evidence is the only evidence tending to show incapacity, it may not be sufficient to take the case to the jury.[3] But where all of the testimony is from experts, based on observation, it cannot be properly disregarded, and an adjudication to the contrary is error.[4]

OPINION EVIDENCE OF NON-EXPERT WITNESSES.

In many, though not in all States, a non-expert or non-professional witness may, after first testifying to facts, circumstances, or the conversation of an alleged insane person, state his opinion as to the sanity of such person. The rules in these States differ as to the extent of knowledge requisite.[5]

the other testamentary witness and others testified to the contrary, and a finding of incapacity was overruled on appeal as not sustained by the evidence. See also Hagan *v.* Sone, 68 App. Div., 60; 74 N. Y. Supp., 109; *In re* Kearney's Will, 69 App. Div., 481; 74 N. Y. Supp., 1045; *In re* Wright's Est. (Pa.), 51 Atl. R., 1031. Brooks *v.* Pratt, 118 Fed. R., 725 (U. S. C. C. A. Mass.), a finding of insanity was sustained though an expert testified that after a personal examination of some length he failed to discover insanity. *In re* Conaty's Will, 26 Misc. R., 104; 56 N. Y. Supp., 854, where opinions of experts that an injured person could not converse as testified, nor comprehend the testamentary act, did not rebut the evidence of subscribing witnesses to the contrary.

In re Lawrence's Will, 27 Misc. R., 473; 59 N. Y. Supp., 174, expert evidence deduced from insanity three months later overcome by testimony of other witnesses as to capacity on the day of the execution. Affd., 48 App. Div., 83, 62 N. Y. Supp., 673.

In re Connor's Will, 61 N. Y. Supp., 910 (Surr.) (hypothetical question involving Bright's disease). Expert evidence respecting the effect of drunkenness on testamentary capacity cannot overcome direct evidence of actual capacity. *In re* Hewitt's Will, 31 Misc. R., 81; 64 N. Y. Supp., 571.

[1] People *v.* Ferraro, 161 N. Y., 365; 14 N. Y. Cr. R., 266; 55 N. E. Rep., 931.

[2] State *v.* Miller, 7 Ohio N. P., 458; 5 Ohio S. and C. P. Dec., 703.

[3] Hagan *v.* Sone, 68 App. Div., 60; 74 N. Y. Supp., 109.

[4] State *v.* Probate Court, Ramsey Co., 83 Minn., 58; 85 N. W. Rep., 917.

[5] *Alabama:* Norris *v.* State, 16 Ala., 776; Powell *v.* State, 25 Ala., 28; Burney *v.* Torrey, 14 So. R., 685; 100 Ala., 157. *Arkansas:* Bolling *v.* State, 54 Ark., 588; 16 S. W. R., 658. *California:* People *v.* Wreden, 59 Cal., 392; People *v.* Sanford, 43 Cal., 29. *Connecticut:* Traut *v.* Thompson, 4 Conn., 203; Dunham's Appeal, 27 Conn., 193. *Delaware:* Duffield *v.* Morris, 2 Harr., 375. *Florida:* Armstrong *v.* State, 30 Fla., 170; 11 So. R., 618. *Georgia:* Walker *v.* Walker, 14 Ga., 242; Choice *v.* State, 31 Ga., 424; Patterson *v.* State, 86 Ga., 70; 12 S. E. R.,

In accordance with this rule a physician may, because of his acquaintance with the alleged incompetent, give his opinion as a non-expert.[1]

It is a general rule that the hypothetical question may not be addressed to a lay witness, even on cross-examination.[2]

Though non-expert witnesses may state facts within their knowledge, and state their opinion thereon, in general they may not state their opinion independently of the facts and circum-

174; Potts *v.* House, 6 Ga., 324. *Idaho:* State *v.* Hurst, 39 Pac. R., 554. *Illinois:* Upstone *v.* People, 109 Ill., 169; Jamison *v.* People, 145 Ill., 357; 34 N. E. R., 486; Rutherford *v.* Morris, 77 Ill., 397. *Indiana:* State *v.* Newlin, 69 Ind., 108; Doe *v.* Reagan, 5 Blackf., 217; 33 Am. Dec., 466; Colee *v.* State, 75 Ind., 511; Eggers *v.* Eggers, 57 Ind., 461; Sutherland *v.* Hankins, 56 Ind., 343; Mill *v.* Carr, 5 Ind. App., 491; 32 N. E. R., 591. *Iowa:* Butler *v.* Ins. Co., 45 Iowa, 93; Kostelecky *v.* Seherhart, 99 Iowa, 120; 68 N. W. R., 591. *Kansas:* State *v.* Beuerman, 59 Kan., 586; 53 Pac. R., 874. *Kentucky:* Abbott *v.* Com., 21 Ky. L. R., 1372; 55 S. W. R., 196; Hite *v.* Com., 20 S. W. R., 217; Massie *v.* Com., 24 S. W. R., 611. *Maryland:* Brooke *v.* Townsend, 7 Gill., 10. *Michigan:* Beaubien *v.* Cieot, 12 Mich., 459; People *v.* Borgetto, 99 Mich., 336; 58 N. W. R., 328; Sullivan *v.* Foley, 70 N. W. R., 322. *Minnesota:* Pinney's Will, 27 Minn., 280. *Mississippi:* Wood *v.* State, 58 Miss., 741. *Missouri:* State *v.* Erb, 74 Mo., 199; Baldwin *v.* State, 12 Mo., 233; State *v.* Klinger, 46 Mo., 224; State *v.* Williamson, 106 Mo., 162; 17 S. W. R., 172. *Nebraska:* Sehleneker *v.* State, 9 Neb., 241; Polin *v.* State, 14 Neb., 540; Schultz *v.* State, 37 Neb., 481; 55 N. W. R., 1080. *New Hampshire:* Hardy *v.* Merrill, 56 N. H., 227; *cf.* State *v.* Pike, 49 N. H., 399. *New Jersey:* Vanauken's case, 2 Stock. Ch., 190; Genz *v.* State, 34 Atl. R., 816. *North Carolina:* Clary *v.* Clary, 2 Ired. L., 78. *Ohio:* Clark *v.* State, 12 Ohio, 483; 40 Am. Dec., 481. *Oregon:* State *v.* Zorn, 22 Ore., 591; 30 Pac. R., 317; State *v.* Hansen, 25 Ore., 391; 36 Pac. R., 296. *Pennsylvania:* Commonwealth *v.* Wirebaek, 190 Pa. St., 138; 42 Atl. R., 542; 43 W. N. C., 506; Pidcock *v.* Porter, 68 Pa. St., 342; 8 Am. Dec., 181; Wilkinson *v.* Pearson, 23 Pa. St., 117; Com. *v.* Cressinger, 193 Pa. St., 326; 44 Atl. R., 433. *South Dakota:* State *v.* Leehman, 2 S. D., 171; 49 N. W. R., 3. *Tennessee:* Dove *v.* State, 3 Heisk, 348; Norton *v.* Moore, 3 Head., 482. *Texas:* Webb *v.* State, 5 Tex. App., 596 (overruling previous decisions); Holeomb *v.* State, 4 Tex., 125; McClaekey *v.* State, 5 Tex. App., 320; Garrison *v.* Blauton, 48 Tex., 299; Brown *v.* Mitehell, 26 S. W. R., 1059. *Utah: In re* Christensen's Estate, 53 Pac. R., 1003; 17 Utah, 412. *Vermont:* State *v.* Hayden, 51 Vt., 296; Cram *v.* Cram, 33 Vt., 15; Hathaway *v.* Ins. Co., 48 Vt., 335; Morse *v.* Crawford, 17 Vt., 499. *Washington:* State *v.* Brooks, 30 Pac. R., 147. *West Virginia:* State *v.* Maier, 36 W. Va., 757; 15 S. E. R., 991. *Wisconsin;* Hempton *v.* State, 111 Wise., 127; 86 N. W. R., 596. *U. S.:* Charter Oak L. Ins. Co. *v.* Rodell, 95 U. S., 232; Conn. Mut. L. Ins. Co *v.* Lothrop, 111 U. S., 612. *England:* See Rex *v.* Wright, R. and R. Crim. Cas., 456. *Cf. infra*, pp. 545–546, New York and Massaehusetts rules.

[1] Commonwealth *v.* Cressinger, 193 Pa. St., 326, 44 Atl. R., 433.

[2] *In re* Dolbeer's Est., 86 Pac. R. (Cal.), 695; Rambler *v.* Tryon, 7 Serg. and Rawl. (Pa.), 90; 10 Am. Dec., 444; Hogmeir's Appeal, 108 Mich., 410; 66 N. W. R., 327; Dunham's Appeal, 27 Conn., 102; Pittard *v.* Foster, 12 Ill. App., 132; Ragland *v.* State, 125 Ala., 12; 27 South., 938; Appleby *v.* Broek, 76 Mo., 314; Bell *v.* MeMaster, 29 Hun (N. Y.), 272; St. Louis Mut. L. Ins. Co. *v.* Graves, 6 Bush (Ky.), 268.

stances within their own personal knowledge,[1] and first testified to by them;[2] or else, in some States, until the witness is shown to have had sufficient knowledge and opportunities of personal observation to form a correct conclusion.[3] The opinion cannot be based on what others have told the witness.[4]

Though the rule is that the facts should be stated first, it has been held in a civil case not reversible error if the witness first gives his opinion and subsequently the facts on which he bases it are elicited.[5]

The failure to ask or obtain the opinion of the witness does not render his testimony as to the facts incompetent.[6]

Full cross-examination of such a witness should be permitted to show additional facts tending to shake the opinion; for instance, a witness having expressed an opinion as to the soundness of testator's mind, may be asked on cross-examination respecting his treatment of his family.[7] Or whether he was competent to make a particular deed, which he is shown to have made.[8]

[1] Armstrong *v.* State, 30 Fla., 170; 11 So. Rep., 618; Ellis *v.* State, 24 S. W. Rep., 894; 33 Tex. Cr. App., 86; *cf.* Mitchell *v.* State (Fla.), 31 So. R., 242; Packham *v.* Ludwig, 103 Md., 416; 63 Atl. R., 1048; Burney *v.* Torrey, 100 Ala., 157; 14 So. Rep., 685; Yarbrough *v.* State, 105 Ala., 43; 16 So. Rep., 758; Hoover *v.* State, 48 Neb., 184; 66 N. W. Rep., 1117; Murphree *v.* Tenn., 107 Ala., 424; 18 So. Rep., 264; *In re* Hoope's Est., 174 Pa. St., 373; 34 Atl. Rep., 603; Williams *v.* State, 37 Tex. Cr. App., 348; 39 S. W. Rep., 687; Hurst *v.* State (Tex. Cr. App.), 40 S. W. Rep., 264; Hawley *v.* Griffin (Iowa), 82 N. W. R., 905. The mere opinion is said to be entitled to little weight, Hudson *v.* Adam's Adm., 20 Ky. Law R., 1267; 49 S. W. Rep., 192, and where it is not supported by the facts upon which it is based, or the facts upon which it is based are not sufficient to show the disappearance of the degree of intelligence required for the particular act in question, the evidence will not justify a finding of incapacity, Englert *v.* Englert, 198 Pa. St., 326; 47 Atl. Rep., 940.

[2] Sheehan *v.* Kearney (Miss.), 35 L. R. A., 102; 21 So. Rep., 41; *in re* McCabe, 70 Vt., 155; 40 Atl. Rep., 52; Roush *v.* Wensel, 15 Ohio C. Ct., 133; Crawford *v.* Christian, 102 Wis., 51; 78 N. W. Rep., 406; Lamb *v.* Lynch, 56 Neb., 135; 76 N. W. Rep., 428; Alvord *v.* Alvord, 109 Iowa, 113; 80 N. W. R., 306; Zirkle *v.* Leonard, 61 Kan., 636; 60 Pac. R., 318; but see Hewitt *v.* Taunton St. Ry. Co., 167 Mass., 483; 46 N. E. Rep., 106, where a father was permitted to state that he considered his child of average intelligence. See also *infra*, p. 542.

[3] Appeal of Turner, 72 Conn., 305; 44 Atl. Rep., 310.

[4] First Nat. Bank *v.* McGinty (Tex. Civ. App.), 69 S. W. R., 495.

[5] Jones *v.* Galbraith (Tenn. Ch. App.), 59 S. W. Rep., 350.

[6] Bower *v.* Bower, 142 Ind., 194; 41 N. E. Rep., 523.

[7] Petefish *v.* Becker, 176 Ill., 448; 52 N. E. Rep., 71.

[8] Dominick *v.* Randolph, 124 Ala., 557; 27 So. Rep., 481.

Who May Express an Opinion.

The Alleged Incompetent Himself. — The person whose condition is under consideration, it is said, is not competent to express an opinion on the former unsoundness of his own mind, to escape an agreement made by him.[1]

Intimate Acquaintance.—Though in California only experts and intimate acquaintances may testify to an opinion, nevertheless a non-expert witness who is not an intimate acquaintance may be asked a grantor's or defendant's appearance or manner at a given time,[2] or as to his peculiar conduct and language,[3] as the question calls for a fact and not an opinion as to mental condition.[4]

The court is to determine who is an "intimate acquaintance,"[5] and the determination is within the discretion of the trial judge.[6] The witness may be asked whether testator appeared rational or irrational,[7] and he may be asked his opinion of testator's mental sanity.[7] In Connecticut an *intimate neighbor* may tell whether a testator was easily influenced or not.[8] In Iowa it has been held that an *acquaintance* is necessarily derived from a series of transactions or conversations.[9]

Attesting Witnesses.—Subscribing or attesting witnesses to a will,[10] or paper alleged to be a will,[11] are generally permitted to express an opinion as to testamentary mental competency[12] of a testator, without other qualifications, and without first testifying to the facts, circumstances, or conversations on which it is

[1] O'Connell *v.* Beecher, 21 App. Div. (N.Y.) 298; 47 N. Y. Supp., 334. *Cf.*, however, page 501–2, *supra.*

[2] Holland *v.* Zollner, 102 Cal., 633; 36 Pac. Rep., 930; People *v.* McCarthy, 115 Cal., 255; 46 Pac. R., 1073. As to "intimate acquaintance" see Wheelock *v.* Godfrey, 100 Cal., 578; 35 Pac. R., 317; People *v.* Barthleman, 52 Pac. Rep., 112; 120 Cal., 7.

[3] Marceau *v.* Travellers' Ins. Co., 101 Cal., 338; 35 Pac. Rep., 856; People *v.* Ellsworth, 127 Cal., 595; 60 Pac. R., 161.

[4] See also Craig *v.* Southard, 148 Ill., 37; 35 N. E. Rep., 361, where witnesses were allowed to state the condition of testator's mind, memory, and judgment.

[5] *In re* Wax's Est., 106 Cal., 343; 39 Pac. Rep., 624.

[6] People *v.* Hill, 116 Cal., 562; 48 Pac. Rep., 711.

[7] *In re* Keithley's Est., 134 Cal., 9; 66 Pac. R., 5.

[8] Appeal of Vivian, 74 Conn., 257; 50 Atl. R., 797.

[9] Hertrich *v.* Hertrich, 87 N. W. Rep., 689.

[10] Kaufman *v.* Caughman, 49 S. C., 159; 27 S. E. Rep., 16.

[11] Scott *v.* McKee, 105 Ga., 256; 31 S. E. Rep., 183.

[12] But not as to mental competency generally, Jones *v.* Collins, 94 Md., 403; 51 Atl. R., 398.

based. Such a witness is subject to cross-examination, but his testimony as to his opinion is competent without first eliciting from him the facts upon which he bases it, other than the fact of the execution and publication of the will by the testator, and the appearance, conduct, and surroundings of the testator at the time of the execution of the will.[2] But such opinion is not entitled to any greater weight on the subject of testator's mental capacity than that of other persons present.[3] In fact, a will has been held properly admitted to probate on the testimony of other witnesses as to testamentary capacity, though one[4] or all[5] of the attesting witnesses expressed the opinion that the testator was incompetent.[6] But the testimony of subscribing witnesses can be overcome only by substantial testimony.[7] The subscribing witness has been allowed to say that he observed no indication of *undue influence* upon the mind of the testator.[8] The subscribing witness is not precluded from expressing his opinion against the competency of the testator.[9]

It has been said, however, that a person who signs as witness to a will impliedly certifies to testamentary capacity, and while he may testify to the contrary, his implied self-stultification may be considered in weighing his testimony.[10]

But where a subscribing witness has testified to facts, and

[1] Hertrich *v.* Hertrich (Iowa), 87 N. W. R., 689. See also Potts *v.* House, 6 Ga., 324; 50 Am. Dec., 329; Scott *v.* McKee, 105 Ga., 256; 31 S. E. R., 183; Robinson *v.* Adams, 62 Me., 369; 16 Am. Rep., 473; Williams *v.* Lee, 47 Md., 321; *in re* Potter, 17 App. Div., 267; 45 N. Y. Supp., 563; Logan *v.* McGinnis, 12 Pa., 27; Tutow *v.* Tutow, 54 Pa., 216; 93 Am. Dec., 691; Gibson *v.* Gibson, 9 Yerg., 329; Van Huss *v.* Rambolt, 2 Cold., 139.

[2] *In re* Folt's Will, 71 Hun (N. Y.), 492; 24 N. Y. Supp., 1052. See *in re* Barber's Est., 63 Conn., 393; 27 Atl. Rep., 973; *infra*, p. 551.

[3] Appeal of Crandall, 63 Conn., 365, 28 Atl. Rep., 531. It is error to instruct the jury as matter of law to the effect that subscribing witnesses are not entitled to greater weight than other witnesses, since this misleads them by omitting the element of individual credibility, and the circumstance that a subscribing witness is expected to inform himself of the testator's capacity before attesting his will. The subscribing witness may as matter of fact be entitled to greater credibility. Safe Deposit and Tr. Co. *v.* Berry (Md.), 49 Atl. R., 401.

[4] Loughney *v.* Loughney, 87 Wis., 92; 58 N. W. Rep., 250. But as between the opinion of an expert witness examined on a hypothetical question and the opinion of the subscribing witnesses, the latter has been suffered to prevail. *In re* Conaty's Will, 26 Misc. R., 104; 56 N. Y. Supp., 854.

[5] *In re* Robinson's Will, 190 Ill., 95; 60 N. E. R., 194.

[6] See *infra*, p. 550.

[7] Fulbright *v.* Perry Co., 145 Mo., 432; 46 S. W. Rep., 955.

[8] Taylor *v.* Pegram (Ill. Sup.), 37 N. E. Rep., 837.

[9] *In re* D'Avignon's Will, 12 Col., 489, 55 Pac. R., 936.

[10] Stevens *v.* Leonard, 154 Ind., 67; 56 N. E. R., 27.

those facts did not tend to show incompetency, it has been held improper to ask him his opinion on the facts.[1] If this is the generally accepted rule it would be proper to ask the opinion of a subscribing witness upon the facts first testified to by him only in case those facts tend to support the opinion of mental unsoundness; in other words, while his opinion might be expressed without basing it on facts first testified to except the execution, publication, and circumstances, if he does testify to other facts tending to show the mental condition of the testator, the facts so testified take the place of his opinion, and then his opinion cannot be expressed on the facts, unless they would tend to support an opinion of unsoundness.

A subscribing witness cannot be asked whether in his opinion the testator had capacity *to make a will*, for that calls for the decision of the whole issue of capacity.[2]

It would seem that the sanction accorded to the opinion of a witness to a will does not extend to the witnesses to a deed or written instrument other than a will; though it has been said as to deeds, that the opinion of an officer taking the acknowledgment or of a person present at its execution is entitled to peculiar weight in considering the grantor's capacity.[3]

Other Non-Expert Witnesses.—Non-expert opinion evidence of competency to execute a will is not confined to the witnesses to the will, for other persons who had peculiar advantages in observing capacity are competent to express an opinion;[4] and persons of long and intimate acquaintance or who have had business transactions with the alleged incompetent[5] may testify.[6] And parties to the contest are not incompetent to give their opinions in jurisdictions where statutes have removed the bar caused at common law by interest.[7]

A non-expert witness sufficiently qualified to testify on ordinary subjects may not be qualified to express an opinion as to

[1] Furlong *v.* Carraher, 108 Iowa, 492; 79 N. W. Rep., 277; or to permit him to express an opinion that defendant was irrational, when the facts testified to did not support the opinion, State *v.* Leehman, 2 S. D., 171; 49 S. W. R., 3.

[2] Furlong *v.* Carraher, *supra.*

[3] Buckey *v.* Buckey, 38 W. Va., 168; 18 S. E. Rep., 383; Delaplain *v.* Grubb, 44 W. Va., 612; 30 S. E. Rep., 201.

[4] Whitelaw's Exr. *v.* Simes, 90 Va., 588, 19 S. E. Rep., 113.

[5] Williams *v.* State (Tex. Cr. App.), 53 S. W. Rep., 859.

[6] Burney *v.* Torrey (Ala.), 14 So. Rep., 685; Brown *v.* Mitchell (Tex.), 23 S. W. Rep., 1059. Also in homicide cases, State *v.* Hurst (Idaho), 39 Pac. Rep., 554.

[7] *In re* Goldthorp's Est., 94 Iowa, 336; 62 N. W. Rep., 845.

sanity. The action of a trial court in excluding the opinion of a thirteen-year-old child upon mental condition has been sustained on appeal.[1]

Persons found by the court to be competent to form opinions and to have had opportunity to form opinions are competent to give their opinions.[2] A clergyman who visited a testatrix during her last illness is competent to express an opinion as to her testamentary capacity at that time.[3] The tendency of the decisions is to confine this sort of opinion evidence to those witnesses who have had a previous personal acquaintance with the alleged insane person.[4]

In Texas, a judge before whom a person had been tried was held not qualified to express an opinion that accused was not insane after stating what he had noticed of the accused during his trial.[5] But in California a jailer was permitted to testify as to the conduct of defendant while in jail and the apparent condition of his mind during that time;[6] and in Oregon, the custodian of prisoner for four months prior to the trial, though not previously acquainted, was allowed to testify that he saw no indication of insanity, and that the accused seemed perfectly rational.[7]

In Texas, an officer was not allowed to testify that when he had heard accused testify in a previous case he testified like a sane man.[8]

In Illinois, a person who had but a passing acquaintance and who had not spoken with deceased, whose mental condition at the time of his death was in question, for eight months prior thereto, was deemed incompetent.[9]

But in Pennsylvania, one who was not personally acquainted with the alleged incompetent, but had seen him frequently and observed him, was permitted to say whether he believed him

[1] Collins *v.* People, 194 Ill., 506; 62 N. E. Rep., 902.

[2] Patten *v.* Cilley, 67 N. H., 520; 42 Atl. Rep., 47.

[3] Ethridge *v.* Bennett's Exrs., 9 Houst. (Del.), 295; 31 Atl. Rep., 813.

[4] See *in re* Christensen's Est., 17 Utah, 412; 53 Pac. Rep., 1003; State *v.* Soper, 148 Mo., 217; 49 S. W. Rep., 1007.

[5] McLeod *v.* State, 31 Tex. Cr. Rep., 331; 20 S. W. Rep., 749.

[6] People *v.* McCarthy, 115 Cal., 255; 46 Pac. R., 1073.

[7] State *v.* Feister, 50 Pac. Rep., 561.

[8] Merritt *v.* State, 39 Tex. Cr., 70; 45 S. W. Rep., 21.

[9] Grand Lodge *v.* Wieting, 168 Ill., 408; 48 N. E. Rep., 59. See also State *v.* Soper, 148 Mo., 217; 49 S. W. Rep., 1007.

insane.[1] The Pennsylvania courts are liberal in admitting this class of testimony.[2]

In Alabama one who had known the alleged incompetent slightly for several years, had seen him occasionally, and had had casual short conversations with him, but no business transactions until a short while previous to the time in controversy, was held incompetent. In the same case a witness was held competent who had known the alleged incompetent twelve years, had had many conversations with him, wrote the contract in question, and saw him execute it.[3]

Upon What Facts or Knowledge an Opinion May Be Expressed by a Non-Expert.

An opinion of insanity based on an enumeration of acts and declarations which were rational has been excluded.[4] A witness cannot give his opinion that testator was insane before testifying to something said or done, fairly tending to show insanity.[5] Nor can he express any opinion without first having testified to facts forming a basis for such opinion.[6] But in Missouri it has been said that a witness may testify that a person is sane without giving his reasons.[7] The value of such testimony will depend largely on the opportunities for correct observation,[8] as well as on the appearances and conduct observed;[9] and where there has been no opportunity for observation except at a time remotely anterior to the time in question the opinion is incompetent;[10] and

[1] Commonwealth *v.* Brown, 193 Pa. St., 507; 44 Atl. R., 497.

[2] Com. *v.* Wireback, 190 Pa. St., 138, 42 Atl. R., 542; 43 W. N. C., 506; Com. *v.* Cressinger, 193 Pa. St., 326; 44 Atl. R., 433.

[3] Dominick *v.* Randolph, 124 Ala., 557; 27 So. Rep., 481.

[4] Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. R., 542; 43 W. N. C., 506.

[5] Lamb *v.* Lippincott, 115 Mich., 611; 73 N. W. Rep., 887.

[6] Roush *v.* Wensel, 15 Ohio C. C. R., 133; Snider *v.* State (Neb.), 76 N. W. Rep., 574. *Supra*, p. 536.

[7] State *v.* Soper, 148 Mo., 217; 49 S. W. Rep., 1007.

[8] Clarke *v.* Irwin (Neb.), 88 N. W. R., 783; Shark *v.* Merriman (Mich.), 66 N. W. Rep., 372.

[9] Armstrong *v.* State, 30 Fla., 170, 11 So. Rep., 618.

[10] Denning *v.* Butcher, 91 Iowa, 425; 59 N. W. Rep., 69; Buys *v.* Buys, 99 Mich., 354; 58 N. W. Rep., 331; Grand Lodge *v.* Wieting, 168 Ill., 408; 48 N. E. Rep., 59. But in Merritt *v.* State, 40 Tex. Cr., 359; 50 S. W. Rep., 384, a witness was deemed competent to express an opinion of sanity, though he had not spoken to the alleged incompetent for five years, who had known him well prior to that. See State *v.* Soper, 148 Mo., 217, 49 S. W. Rep., 1007, where a person had seen accused only three times and had no acquaintance with him and was not permitted to express an opinion. In Safe Dep. and T. Co. *v.* Berry, 49 Atl. R., 401 (Md.), a witness who based his opinion

also where it does not appear how long or how intimately the witness had known the insane person.[1]

Where an opinion of mental incapacity was admitted without facts to sustain it, the opinion was not deemed sufficient evidence to prove the incapacity.[2] The opinion must be based on facts which to some extent justify or reasonably tend to support it,[3] but it is not incompetent because of little opportunity to observe or little knowledge if the facts shed much light on the alleged incompetent's mental condition.[4] The question[5] and the opinion[6] must be confined to the facts stated.

One opinion is not a sufficient foundation for another, and because a witness is of the opinion that an accused person is not

upon two interviews with testator in which he made mistakes that appeared not unreasonable as to the identity of a watch and of a person was held incompetent. And in this case also where the opinion was based on physical change and grief, it was incompetent because unimpaired intellect is consistent with both; as was also an opinion based on conversations showing physical weakness and loss of memory; and an opinion based on unwillingness to converse with witness; and an opinion based on a statement by testator. on application to him for a loan, that he did not have a dollar in the world and his affairs were mixed up, when he was actually wealthy; or on physical weakness and depression; or on inability to sign a receipt, and weakness, and subsequent refusal to talk to witness, while weak and suffering; or on a repeated mistake in calling a person's name, after correction, or on a statement by testator that he could not remember well as his head was not the same as it used to be; or on physical debility alone; or upon a physical condition subsequent to the execution of the will, which was different from his condition at the time of executing the will; or on business transactions six years before and evident forgetfulness with respect to the condition of testator's account with a lodge to which he always paid his dues in advance. It is to be noted that in this case numerous criteria for qualifying a non-expert witness to give his opinion were presented, and that they all failed to meet the requirement that the opinion must be based upon facts which justify the expression of an opinion upon the question of mental capacity. The court took the view that each of these non-expert witnesses was incompetent, because an opinion as to mental capacity based on any one set of facts stated by the several witnesses would not justify an opinion of incompetency.

In contrast see Brashears *v.* Orme (Md.), 49 Atl. R., 620, where testator grabbed witness's horse in the road, and asked him what he was doing for his soul; subsequently denied it; asked witness to kill him and drew up a paper of exoneration, and cried when witness refused; these acts were held sufficient to qualify witness to express an opinion on testamentary capacity—but an opinion could not be based on testator's attempt to commit suicide twenty-five years before.

[1] Taylor *v.* U. S., 7 App. D. C., 27.

[2] St. Joseph's Convent *v.* Garner, 66 Ark., 623; 53 S. W. Rep., 298.

[3] O'Connor *v.* Madison, 98 Mich., 183; 57 N. W. Rep., 105; Alvord *v.* Alvord, 109 Iowa, 113; 80 N. W. Rep., 306; Boorman *v.* N. W. Mut. Relief Assn., 90 Wis., 144; 62 N. W. Rep., 924; Youn *v.* Lamont, 56 Minn., 216; 57 N. W., 478; Furlong *v.* Carraher, 108 Iowa, 492.

[4] Kettemann *v.* Metzger, 23 Ohio Cir. Ct. R., 61.

[5] Furlong *v.* Carraher, 102 Iowa, 358, 71 N. W. Rep., 210.

[6] Zirkle *v.* Leonard, 61 Kan., 636, 60 Pac. R., 318.

capable of distinguishing right from wrong that opinion is not a foundation sufficient to render admissible his opinion whether the accused would have sufficient mental power "to keep from committing a crime."[1]

In Kentucky, a non-expert witness may give his opinion as to the mental condition of defendant when he speaks from acquaintance with and knowledge of him, though he relate no particular circumstance in support of his views.[2] Neighbors who testify to incidents showing mental unsoundness of defendant at different periods of his life may express their opinion thereon.[3] So in Missouri, when they show that they observed his actions and conversation, they may state their opinion that he was sane.[4]

In Connecticut, non-expert witnesses who had frequently met and conversed with testatrix were permitted to give their opinions, though they could not give in detail any conversation.[5] In Iowa a non-expert may give an opinion on mental condition after giving facts showing an acquaintance and knowledge of the person.[6] In North Carolina an *intimate* acquaintance who has observed the mental condition of the alleged incompetent may give his opinion as to his mental capacity to make such a contract as one in issue.[7]

A conversation with testator on the subject of wills, four years prior to the execution of the will in question, was in Indiana held a sufficient basis for the opinion of a non-expert.[8]

In Iowa a stenographer who was engaged in taking testatrix's deposition for two hours was permitted to give an opinion after stating what took place at the examination.[9]

In Michigan it has been said that the witness, in order to express an opinion of incompetency based on observation, must

[1] Shaeffer *v.* State, 61 Ark., 241, 32 S. W. Rep., 679.

[2] Cotrell *v.* Com. (Ky.), 17 S. W. Rep., 149; Newcomb's Exrs. *v.* Newcomb, 16 Ky. Law R., 376; 27 S. W. Rep., 997. See also Bulger *v.* Ross, 98 Ala., 267; 12 So. Rep., 803.

[3] Massic *v.* Commonwealth, 15 Ky. Law R., 562; 24 S. W. Rep., 611.

[4] State *v.* Bronstine, 147 Mo., 520; 49 S. W. Rep., 512.

[5] Appeal of Shanley, 62 Conn., 325; 25 Atl. Rep., 245. See also Appeal of Kimberly, 68 Conn., 428; 36 Atl. Rep., 847. See also Pflueger *v.* State, 46 Neb., 493; 64 N. W. Rep., 1094; but the witness must show sufficient knowledge and opportunity to form a correct conclusion as to testator's mental condition, *or else* must first testify to sufficient facts on which to base an opinion. Appeal of Turner, 72 Conn., 305; 44 Atl. R., 310.

[6] Kosteleeky *v.* Seherhart, 99 Iowa, 120; 68 N. W. Rep., 591.

[7] Whitaker *v.* Hamilton, 126 N. C., 465; 35 S. E. Rep., 815.

[8] Bower *v.* Bower, 142 Ind., 194; 41 N. E. Rep., 523.

[9] *In re* Fenton's Will, 97 Iowa, 192; 66 N. W. Rep., 99.

show that there was something in the appearance of the person to justify the inference, though it may be sufficient that there were acts and appearances which the witness cannot describe, but which produced an impression on his mind.[1]

A witness, in Texas, was not permitted to say that he saw accused on the day of the homicide, and he thought the accused was pale and haggard, and it seemed there was some trouble; the court regarded this as opinion evidence, not based upon a statement of facts.[2] But, where a non-expert witness had known a person several years and had associated with him almost daily, he was permitted, not only to state the facts that the person was simple-minded and had no memory of time or place, but to express the opinion that he was not of sufficient intelligence to distinguish between alcohol, whiskey, and wine.[3]

The opinion may be based on any sufficient observation to justify it; accordingly it is not necessary that the observation should include the transaction of business,[4] though a business transaction is in question in the suit.

The opinion of a non-expert witness who has testified to facts must be based upon the facts stated; accordingly, having testified to facts, he cannot be asked his opinion on what he knows, but has not stated,[5] nor on what he knows and what he has heard.[6]

Conduct and conversation observed by a non-expert witness, even though while the accused was in prison, are not regarded as confessions; they can, therefore, be stated by the witness and used as the basis of his opinion, though the accused was not cautioned that they might be used against him.[7] And certainly where the prisoner has been warned that what he says may be used against him, his statements to the sheriff who has him in custody may be introduced in evidence as the basis of the sheriff's opinion as to his sanity.[8]

The New York Rule.—In New York a non-expert wit-

[1] Prentis *v.* Bates, 93 Mich., 234; 53 N. W. Rep., 153.

[2] Spangler *v.* State, 55 S. W. Rep., 326.

[3] Johnson *v.* State (Tex. Cr. App.), 62 S. W. Rep., 756.

[4] Ring *v.* Lawless, 190 Ill., 520; 60 N. E. Rep., 881; *e.g.*, observation of conduct toward wife, and knowledge that a cancer in the head had been twice removed, Jones *v.* Collins, 94 Md., 403, 51 Atl. R., 398.

[5] State *v.* Robbins (Iowa), 80 N. W. Rep., 1061.

[6] State *v.* Peel, 23 Mont., 358; 59 Pac. R., 169.

[7] Adams *v.* State, 34 Tex. Cr., 470; 31 S. W. Rep., 372.

[8] Burt *v.* State, 38 Tex. Cr. 397; 40 S. W. Rep., 1000.

ness may not give his opinion as to "sanity or insanity" but may characterize as "rational or irrational,"[1] or as the acts and conversation "of a rational person,"[2] the acts and conversation of a defendant on trial under an indictment, or of any person whose sanity is in question in a civil case, which he observed and has previously detailed.[1] In New York it has been strictly held that a lay witness may not express his general opinion, but only whether the particular words or acts were rational.[3] He must state, it is said, not his opinion on the subject of sanity or insanity, but the impression that the acts and declarations produced on his own mind at the time.[4]

The Massachusetts Rule.—In Massachusetts non-expert witnesses are not permitted to testify to their opinion as to the sanity of a person or the rationality of his acts.[5] A lay witness may be asked whether a person has during a stated period of time "failed mentally," but that seems to be about the limit of such questioning.[6]

The Function of Judge and Jury with Respect to Competency and Weight of Non-Expert Opinion Evidence.

It is the province of the court to say whether the opinion of a non-expert witness is based on sufficient observation,[7] and by preliminary examination of the witness to determine whether he is a competent witness.[8] The court may exclude the witness's conclusion as to what a person had capacity to know, when he has testified in detail as to the facts within his knowledge

[1] Holcomb *v.* Holcomb, 95 N. Y., 316; People *v.* Taylor, 138 N. Y., 398, 409; 52 N. Y. St. Rep., 914; People *v.* Strait, 148 N. Y., 566; 42 N. E. Rep., 1045. Followed in New Mexico, Territory *v.* Padilla, 8 N. M., 510; 46 Pac. R., 346.

[2] Johnson *v.* Cochrane, 159 N. Y., 555; 54 N. E. R., 1092; Paine *v.* Aldrich, 133 N. Y., 544; 30 N. E. R., 725; but see Carpenter *v.* Bailey, 94 Cal., 406.

[3] White *v.* Davis, 62 Hun, 622; 17 N. Y. Supp., 548.

[4] People *v.* Youngs, 151 N. Y., 210; 45 N. E. Rep., 460; Wyse *v.* Wyse, 155 N. Y., 367; 49 N. E. Rep., 942.

[5] Com. *v.* Rogers, 7 Metc., 500; 4 Am. Dec., 458; Com. *v.* Rich, 14 Gray, 335; Smith *v.* Smith, 157 Mass., 389; 32 N. E. R., 348; May *v.* Bradlee, 127 Mass., 414, 421.

[6] Clark *v.* Clark, 168 Mass., 523; 47 N. E. R., 510; Com. *v.* Brayman, 136 Mass., 148.

[7] Hite *v.* Commonwealth, 14 Ky. Law R., 308; 20 S. W. Rep., 217; Denning *v.* Butcher (Iowa), 59 N. W. Rep., 69; O'Connor *v.* Madison, 98 Mich., 183; 57 N. W. Rep., 105; Crawford *v.* Christian, 102 Wis., 51; 78 N. W. Rep., 406; Hempton *v.* State, 111 Wis., 127; 86 N. W. Rep., 596.

[8] Grand Lodge *v.* Wieting, 168 Ill., 408; 48 N. E. Rep., 59.

showing what the person knew.[1] In Washington it was held not to be an abuse of the court's discretion to refuse to allow a non-expert witness to express an opinion after he had stated all of the facts known to him.[2] And in Iowa, to exclude an opinion on the facts, where the facts would not tend to support an opinion of mental unsoundness,[3] on the theory, doubtless, that the speculations of non-expert witnesses will not be permitted, where the evidence gives no ground for such speculation. It will thus be seen that the court has considerable latitude of discretion as to what it will submit to the jury. The weight of the evidence is, of course, for the jury to decide.[4]

The Limits of Opinion Evidence of Non-Expert Witnesses.—While a witness may state his opinion as to mental unsoundness or manifestations, he may not state whether in his opinion the degree of incapacity has been reached which renders one incapable of managing his estate, that being the province of the jury.[5] Nor that the accused knew the difference between the right and wrong of his act.[6] Nor can he give his opinion as to the existence of a specific mental disease such as paresis.[7] But he may express the opinion that accused was sane[8] and capable of making a deed.[9] The witness's mere opinion as to what a person knew or must have known with respect to a deed, after the witness has testified to all the facts within his own knowledge tending to show what the person actually knew of the deed, is inadmissible.[10]

While a witness has been permitted to express his opinion as to the mental capacity of a grantor to execute a particular

[1] Gress Lumber Co. *v.* Coody (Ga.), 27 S. E. Rep., 169.

[2] Clum *v.* Barkley, 20 Wash., 103; 54 Pac. Rep., 962. *Contra:* Error to refuse to allow expression of opinion on facts testified to by witness, State *v.* Wright (Iowa), 84 N. W. Rep., 541.

[3] Furlong *v.* Carraher, 108 Iowa, 492; 79 N.W. Rep., 277. *Cf. supra,* note 3, p. 543.

[4] Genz *v.* State (N. J.), 34 Atl. Rep., 816; Clarke *v.* Irwin (Iowa), 88 N. W. R., 783.

[5] Hanniek *v.* State, 134 Ind., 324, 34 N. E. Rep., 3.

[6] Shults *v.* State, 37 Neb., 481; 55 N.W. Rep., 1080. But see Pflueger *v.* State, 46 Neb., 493; 64 N.W. R., 493.

[7] *In re* McCabe, 70 Vt., 155; 40 Atl. Rep., 52.

[8] State *v.* Soper, 148 Mo., 217; 49 S. W. Rep., 1007. *Contra,* Jones *v.* Collins, 94 Md., 403; 51 Atl. R., 398, where it was said that a witness in a will contest cannot express opinion as to whether testator was entirely sane, but his opinion must be confined to the question whether he had a disposing mind.

[9] Hayes *v.* Candee (Conn.), 52 Atl. R., 826; such a question refers to mental condition, not to legal capacity, and is therefore the proper subject of opinion evidence.

[10] Gress Lumber Co. *v.* Coody (Ga.), 27 S. E. Rep., 169.

contract in issue,[1] it has been held improper to permit him to express an opinion as to capacity to appreciate and understand contracts.[2] But, on the other hand, it has been deemed proper to allow an opinion as to competency to transact legal business[3] or business.[4] A witness may not state his opinion that the deceased had capacity[5] or was in a condition[6] to make a will.

It is competent for a witness who has laid the foundation for his opinion to express the opinion that a testator was "childish"[7] or acted in a childish manner (a contrary view has been expressed in Maryland);[8] that his expression was "simple";[9] and that he acted like a rational man;[10] and that he seemed "weak" and "weak-minded";[11] or of average intelligence;[12] or did not seem to know what he did.[13] But a question calling for an opinion whether testator was of sound mind, as he had been "in prior years," without fixing the time, was inadmissible.[14] A witness was permitted to express an opinion whether a person had failed in her mental capacity in the last five years,[15] but not to make the comparison that a grantor was no more competent to make contracts than a child of immature age and understanding.[16]

It is proper to ask, after a witness has stated in detail his observations, whether there was anything else "strange or unusual" in the conduct of the alleged incompetent.[17] Such witnesses have been permitted to express an opinion whether an

[1] Whitaker *v.* Hamilton, 126 N. C., 465, 35 S. E. Rep., 815.

[2] Mills *v.* Cook (Tex. Civ. App.), 56 S. W. Rep., 697.

[3] Hepler *v.* Hosack, 197 Pa. St., 631; 47 Atl. R., 847.

[4] Hayes *v.* Candee (Conn.), 52 Atl. R., 826.

[5] Brown *v.* Mitchell (Tex.), 31 S. W. Rep., 621. *Cf.* Jones *v.* Collins, *supra*, p. 545. But see, *contra*, in case of a physician, McHugh *v.* FitzGerald (Mich.), 61 N. W. Rep., 354.

[6] Hopkins *v.* Wheeler, 21 R. I., 533; 45 Atl. Rep., 551.

[7] Burney *v.* Torrey, 100 Ala., 157; 14 So. Rep., 685.

[8] Cicero, etc., *v.* Richter, 85 Ill. App., 591.

[9] Safe Dep. and T. Co. *v.* Berry, 49 Atl. R., 401, the phrase being regarded as ambiguous and indefinite.

[10] *In re* Wax's Est., 106 Cal., 343; 39 Pac. Rep., 624.

[11] *In re* Goldthorp's Est., 94 Iowa, 336; 62 N. W. Rep., 845.

[12] Hewitt *v.* Taunton St. Ry. Co., 167 Mass., 483; 46 N. E. Rep., 106.

[13] Green *v.* State, 64 Ark., 523; 43 S. W. Rep., 973. *Cf.* Messner *v.* Elliott, 184 Pa. St., 41; 39 Atl. Rep., 46, where such comparison was deemed immaterial.

[14] Denning *v.* Butcher, 91 Iowa, 425; 59 N. W. Rep., 69. *Cf.* Cicero, etc., *v.* Richter, 85 Ill. App., 591.

[15] Clark *v.* Clark, 168 Mass., 523; 47 N. E. Rep., 510.

[16] Mills *v.* Cook (Tex. Civ. App.), 57 S. W. Rep., 81.

[17] Petefish *v.* Beeker, 176 Ill., 448; 52 N. E. Rep., 71.

infant was possessed of sufficient discretion to be guilty of contributory negligence.[1]

Opinions on the issue of mental competency are not permitted to extend beyond the issue; therefore, a witness may not express an opinion as to the cause of ill-feeling between testator and another;[2] such a matter is not the subject of opinion evidence.

But opinions as to the tone and manner of a person are admissible,[3] or rather, one who observes the tone and manner, in testifying as to the fact, may characterize the tone and manner; a witness may say that another "seemed to be angry."[4]

A witness may express his opinion whether testator possessed sufficient understanding to transact ordinary business incident to the management of his household affairs and property;[5] though that ability is not the measure of testamentary capacity;[6] or that a person was simple-minded and had no memory of time or place.[7]

PRESUMPTIONS.

A Résumé of the Presumptions Respecting Insanity.

The Presumption of Sanity.—The effect, and, to some extent, the nature of the presumption of sanity, are treated below in connection with the burden of proof in cases involving the issue of mental competency.[8] At this place only some special aspects of the presumption require consideration.

The presumption of sanity may be defined in its application to criminal prosecutions as that generalization of experience which requires a court and jury to assume at the outset, in the absence of proof of the actual condition of the accused's mind,[9] that he had the mental capacity to form a criminal purpose, and to deliberate and premeditate on an act which malice, anger,

[1] St. Louis, etc., Ry. Co. *v.* Shifflet, 56 S. W. Rep., 697 (Tex. Civ. App.).

[2] Miller *v.* Miller, 187 Pa. St., 572, 41 Atl. Rep., 277; 43 W. N. C., 84.

[3] Logan *v.* State (Tex. Cr. App.), 53 S. W., 694.

[4] Catlett *v.* State (Tex. Cr. App.), 61 S. W. Rep., 485.

[5] Appeal of Turner, 72 Conn., 305; 44 Atl. R., 310.

[6] See as to measure of testamentary capacity, *supra*, p. 385.

[7] Johnson *v.* State (Tex. Cr. App.), 62 S. W. Rep., 756.

[8] *Infra*, p. 556. See also *supra*, p. 385.

[9] Davis *v.* United States, 160 U. S., 469; 16 Supr. Ct. Rep., 353.

hatred, revenge, or evil disposition might impel;[1] or had the mental capacity to understand the nature and quality of his act and to know that it was wrong.[2] And, whatever may be the local rule of criminal responsibility, the presumption in any event requires the court and jury to assume *prima facie* that the accused enjoyed freedom of will, in the sense of the power to make a conscious choice between right and wrong.[3] To these may be added a further assumption, that the accused made his choice of action upon premises of fact gained by the exercise of normal faculties of perception, not upon premises of insane delusion.[4] In civil cases substantially the same definitions apply.[5]

To a degree, the presumption of sanity is, we think, of only *prima facie* force, and vanishes as an element in the case when its place is taken by direct evidence; but still it remains, as some courts hold, a rule to judge the proved facts by, and the court and jury will until the end of the trial bear in mind that when two conclusions may equally well be drawn from an item of proof, one of sanity and the other of insanity, the presumption requires the inference of sanity to be chosen.[6]

Presumption of Consciousness.—There is a presumption of consciousness allied to that of sanity,[7] and this presumption extends to a consciousness of the character of an act, for instance, an act of self-destruction.[8]

Presumption Against Presumption.—The presumption of sanity yields to the stronger presumption of continuance of insanity of a permanent character.[9] But when the proof is that the insanity was of an intermittent character, with lucid intervals, the presumption of insanity does not yield to any presumption of the continuance of an unsound mental state.[10]

The Presumption of Testamentary Capacity.[11]—In probate proceedings it is generally provided by statute how the

[1] State *v.* Miller, 7 Ohio N. P., 458; 5 Ohio S. & C. P. Dec., 703.

[2] *Supra*, p. 431.

[3] *Supra*, p. 448.

[4] *Supra*, p. 462.

[5] See Snodgrass *v.* Knight, 43 W. Va., 294; 27 S. E. R., 233; Delaplain *v.* Grubb, 44 W. Va., 612; 30 S. E. R., 201.

[6] *Cf. infra*, p. 558; Appeal of Sturdevant, 71 Conn., 392; 42 Atl. R., 70.

[7] State *v.* Hill (N. J.), 47 Atl. R., 814 (a confession).

[8] Dickerson *v.* Northwestern Mut. L. Ins. Co., 200 Ill., 270; 65 N. E. R., 694.

[9] *In re* Lapham's Will, 19 Misc. R. (N. Y. Surrogate), 71; 44 Supp., 597; for the latter presumption, see *infra*, p. 551.

[10] Pike *v.* Pike, 104 Ala., 642; 16 So. R., 689.

[11] See also *infra*, p. 565, for burden of proof in will controversies.

will shall be proved, and usually the subscribing witnesses are required to testify as to the mental capacity of the testator;[1] in such cases, in the absence of any proof of sound mind, it is improper to admit the will to probate; it has therefore been said that the presumption of sanity does not extend to probate proceedings.[2] But this is not the law in all States. In Delaware a person over twenty-one is presumed to have testamentary capacity.[3] And in Pennsylvania it has been said that testamentary capacity is always presumed unless the contrary is shown.[4] In Iowa and Indiana also the presumption of sanity exists in probate proceedings.[5] In Pennsylvania, where the making and execution are not denied, testamentary capacity is presumed.[6]

The presumption of testamentary capacity arises upon proof that testator was capable of understanding and transacting the ordinary business of life.[7]

The Presumption of Continuance of Insanity.—The presumption of continuance when it applies to insanity overcomes the presumption of sanity.[8]

After an adjudication of insanity the presumption of continuance is said to be conclusive, until there is a direct adjudication of restoration;[9] but this general rule has been subjected to exceptions.[10]

No legal presumption of absolute recovery from a state of acknowledged insanity arises from the lapse of time alone.[11]

And generally there is a presumption of the indefinite *continuance* of insanity or mental unsoundness,[12] of a character deemed

[1] But not always; for instance, in Maine such testimony is not required. *In re* Wells, 96 Me., 161; 51 Atl. R., 868.

[2] *In re* Baldwin's Est., 13 Wash., 666; 43 Pac., 934. Hoyt, C. J., dissenting. See *infra*, p. 565. *In re* Thomson, 92 Me., 563; 43 Atl. Rep., 511.

[3] Steele *v.* Helm, 2 Marv. (Del.), 237; 43 Atl. R., 153.

[4] *In re* Hoyt's Est., 10 Kulp., 166.

[5] See *infra*, p. 566.

[6] Messner *v.* Elliott, 184 Pa. St., 41; 39 Atl. Rep., 46.

[7] Harp *v.* Parr, 168 Ill., 459; 48 N. E. Rep., 113.

[8] *Supra*, p. 550.

[9] Wallace *v.* Frey, 27 Mise. R., 29; 56 N. Y. Supp., 1051.

See *supra*, p. 525, "*Adjudications as evidence.*"

[10] See *supra*, pp. 525–527.

[11] Shelford on Lunatics, 275; 1 Greenleaf on Evidence, see. 42; People *ex rel.* Norton *v.* N. Y. Hospital, 3 Abb. N. C., 229.

[12] Lantes *v.* Davidson, 60 Kan., 389; 56 Pac. R., 745. See note to Ford *v.* State (Miss.), 35 L. R. A., 117. Herndon *v.* Viek, 18 Tex. Civ. App., 583; 45 S. W. Rep., 852; *infra*, p. 563; State *v.* Robbins (Iowa), 80 N. W. Rep., 1061 (see this ease for facts entitling to instruetion on this point).

continuous[1] or liable to be permanent.[2] But that presumption does not apply to mental unsoundness of a temporary[3] or spasmodic[4] character; nor to drunkenness,[5] though it be habitual drunkenness.[6] It does not apply to delirium tremens.[7] It does not apply to incapacity produced by the violence of disease and the inordinate use of drugs, though coupled with infirmity of age, where the actual producing cause is temporary.[8] But it does apply to incapacity due to old age.[8]

Where the insanity is of a temporary character, it has been held that because there is no presumption of its continuance there is no presumption of incompetence at the time of the execution of a codicil by a person incompetent by reason of temporary insanity at the time of making his will, though the codicil was made only three days later.[9] But in New York, where the grantor in a deed was shown to be mentally incompetent on the day of the execution of a deed, it was said to be a question of fact whether he was in the same mental condition at the time of its delivery several days afterward.[10]

The presumption of continuance does not render an adjudication of insanity admissible to prove insanity prior to the adjudication.[11]

Presumption of Insanity.—In North Carolina it was said that no presumption of incompetency to execute a deed arose from a combination of age and long continued physical disease, increas-

[1] *Infra*, p. 563.

[2] Hempton *v.* State, 111 Wis., 127; 86 N. W. Rep., 596.

[3] *Infra*, p. 564, Murphree *v.* Senn (Ala.), 18 So. Rep., 264; Kellogg *v.* U. S., 43 C. C. A., 179; 103 Fed. R., 200.

[4] People *v.* Findley, 132 Cal., 301; 64 Pac. R., 472; Ford *v.* State, 71 Ala., 385; People *v.* Francis, 38 Cal., 183; Armstrong *v.* State, 30 Fla., 170; 17 L. R. A., 484; 11 So. R., 618; Langdon *v.* People, 133 Ill., 382; 24 N. E. R., 874; State *v.* Reddiek, 7 Kan., 143; Ford *v.* State, 73 Miss., 734; 35 L. R. A., 117; 19 So. R., 665; State *v.* Sewell, 48 N. C., 245; Leache *v.* State, 22 Tex. App., 279; 58 Am. Rep., 638; 3 S. W. R., 539; State *v.* Wilner, 40 Wis., 304; *Contra*, see Overall *v.* State, 15 Lea, 672.

[5] Howard *v.* State, 36 S. W. Rep., 475; 37 Tex. Cr. App., 494, even though it was only four or five hours previous. State *v.* Alcom, 137 Mo., 121; 38 S. W. Rep., 548. See *supra*, p. 524, *Evidence of Intoxication.*

[6] Koegel *v.* Egner, 54 N. J. Eq., 623; 35 Atl. Rep., 394; but the habit, as distinguished from the intoxication, may be presumed to continue, Mcgraw *v.* McGraw, 50 N. E. R., 526.

[7] Kellogg *v.* U. S., 103 Fed. Rep., 200; 43 C. C. A., 179. Von de Veld *v.* Judy, 143 Mo., 348; 44 S. W. R., 1117.

[8] Raymond *v.* Wathen, 142 Ind., 367; 41 N. E. Rep., 815.

[9] *In re* Nelson's Est., 132 Cal., 182; 64 Pac. R., 294.

[10] Jones *v.* Jones (N. Y.), 63 Hun, 630; 17 N. Y. Supp., 905.

[11] Small *v.* Champeny, 102 Wis., 61; 78 N. W. Rep., 407. See *supra*, p. 527.

ing in virulence and resulting in death within three months after its execution, notwithstanding the deed was a bounty.[1]

Presumption of Continuance of Sanity.—The presumption of continuance applies as well to sanity as to insanity; therefore a court was held justified in charging as matter of law that, if accused was sane up to within a short time of the homicide, was sane afterward, and remained sane thereafter till the trial, they should find he was sane at the time of the homicide.[2] But such an instruction would seem a little too strong to be given in every case where temporary insanity may be asserted.[3]

Undue Influence.—As a general rule, it is doubtless true that there is no presumption of a continuance of undue influence shown to have once existed.[4]

Presumptions as to Undue Influence.

When, in litigations respecting gifts between the living or contracts based upon grossly inadequate consideration, a confidential relation is established, involving more or less dependence by one upon the other, a presumption of fraud and undue influence straightway arises against the one benefiting thereby, which he is absolutely bound to overcome.[5] This is an essentially arbitrary presumption, enforced by the courts partly because of the difficulty of proving fraud and undue influence, and partly because of the inherent suspiciousness of gifts, or virtual gifts under the guise of contracts between the living.

"A court of equity interposes its benign jurisdiction to set aside instruments executed between persons standing in the relations of parent and child, guardian and ward, physician and patient, solicitor and client, and in various other relations in which one party is so situated as to exercise a controlling influ-

[1] Williams *v.* Haid, 118 N. C., 481; 24 S. E. Rep., 217. This was, it may be remarked, an instance of a common misuse of the word "presumption." What the court meant was merely that the evidence *did not prove, raised no inference of,* insanity.

[2] Taylor *v.* U. S., 7 App. D. C., 27. See as to presumption of continuanee of a state of sanity shown to have existed one month prior to making will, Johnson *v.* Johnson, 187 Ill., 86; 58 N. E. Rep., 237.

[3] See *supra*, p. 461.

[4] See *in re* Shell's Est. (Colo.) 63 Pac. R., 413.

[5] Smith *v.* Kay (Eng.), 7 H. L. Cas., 771; Towson *v.* Moore, 11 App. Dist. Col., 377; Green *v.* Roworth, 113 N. Y., 470; Ten Eyck *v.* Whitbeck, 156 N. Y., 341, 353; Doheny *v.* Lacy, 168 N. Y., 213; and eases cited in these eases.

ence over the will and conduct and interests of another. In some cases undue influence will be inferred from the nature of the transaction alone; in others from the nature of the transaction and the exercise of occasional or habitual influence."[1]

This presumption applies with especial force where one party is weaker mentally than the other.

Gifts by Will.—As to gifts from the dead by will, involved in testamentary litigation, it seems to be settled in practically all the States that this presumption does not exist with full force. It is then not wholly inoperative, but exercised indirectly rather than directly. It has been held that a confidential relation between testator and beneficiary imposes upon the latter the onus of offering further testimony, additional explanation.[2] Such relation increases the weight of other more direct evidence of fraud and undue influence; fraud may then be inferred and regarded as established with less proof from the party alleging it than he otherwise would be required to furnish. In a word, confidential relationship is a circumstance to be considered when a testator has made gifts otherwise than impartially to the natural objects of his bounty.[3]

In fact, it may be questioned whether in testamentary litigations there is any presumption at all, in the true legal sense of a rule of law by which an unproved fact may be assumed.[4] Confidential relations are merely a matter of circumstantial evidence. Taken with other affirmative evidence of imposition, they may require a conclusion against the will.

"Fraud is never to be presumed from the mere concurrence of temptation and opportunity, or from the mere fact that the chief actor is also the principal beneficiary. It must be established by affirmative evidence. It is thus established, however, when facts are proved from which it results as an unavoidable inference. When such evidence is furnished, the burden of repelling the presumption to which it leads is cast upon the party to whom the fraud is imputed."[5]

In general, unless there is evidence tending to show or raise

[1] Sears *v.* Shafer, 6 N. Y., 268, 272; Story's Eq. Jur., §§ 308–324.

[2] Tyler *v.* Gardiner, 35 N. Y., 559, 574.

[3] Tyler *v.* Gardiner, 35 N. Y., 559.

[4] Matter of Peek, 6 Dem. (N. Y.), 299; Will of Martin, 98 N. Y., 196; Matter of Smith, 95 N. Y., 516; Post *v.* Mason, 91 N. Y., 539; Coit *v.* Patchen, 77 N. Y., 539; cases cited below.

[5] Tyler *v.* Gardiner, 35 N. Y., 554, 594.

an inference or presumption of undue influence, the absence of such influence must be presumed.[1]

Among the elements, "the familiar indicia of undue influence," which when proved concurrently may cast the burden on the beneficiary of proving the absence of improper influence, may be mentioned: superiority of mental power and capacity of the beneficiary; confidential relations, with opportunity or power to influence; and an unnatural or unjust division of property.[2] One or two of these circumstances will not alone be sufficient to raise any presumption of undue influence that will cast the burden on the beneficiary to show the fairness of the will.[3]

[1] Messner *v.* Elliott, 184 Pa. St., 41; 39 Atl. R., 46.

[2] Whitelaw's Exr. *v.* Sims, 90 Va., 588; 19 S. E. R., 113; Robinson *v.* Robinson, 203 Pa. St., 400; 53 Atl. R., 253; Coghill *v.* Kennedy, 119 Ala., 641; 24 So. R., 459; McQueen *v.* Wilson, 31 So. R. (Ala.), 94; Patten *v.* Cilley, 67 N. H., 520; 42 Atl. R., 47; *In re* Brush's Will, 35 Misc. R., 689; 72 N. Y. Supp., 421; *In re* Wheeler's Will, 5 Misc. R. (N. Y. Surr.), 279; 25 Supp., 313; Scattergood *v.* Kirk, 192 Pa. St., 263; 43 Atl. R., 1030; 44 W. N. C., 313.

[3] The following have been held insufficient, in recent cases:

Weakness of a testator in mind and body coupled with mere opportunity to influence; *In re* Bedlow's Will, 67 Hun (N. Y.), 408; 22 N. Y. Supp., 290; *In re* Pitt's Est. (Wis.), 55 N. W. Rep., 149; Maddox *v.* Maddox, 114 Mo., 35; 21 S. W. Rep., 499; Interest and opportunity,—*In re* Clark's Will, 5 Misc. Rep. (N. Y.), 68; 25 N. Y. Supp., 712; *in re* Nelson's Est., 132 Cal., 182; 64 Pac. R., 294; Inequality and opportunity,—McFadin *v.* Catron, 138 Mo., 197; 38 S. W. Rep., 932.

Relationship of husband and wife,—Bulger *v.* Ross, 98 Ala., 26; 12 So. R., 803; *in re* Green's Will, 20 N. Y. Supp., 538; *id.*, 67 Hun, 527; 22 Supp., 1112; Orth *v.* Orth (Ind.), 44 N. E. R., 17.

Though coupled with a sudden reconciliation,—*in re* Cruger's Will, 31 Misc. (N. Y.), 272; 23 Supp., 412.

Filial relation,—*in re* Logan's Est., 195 Pa. St., 282; 45 Atl. R., 729; *in re* Bonner, 33 Misc. (N. Y.), 9; 67 Supp., 1117; *in re* Hurlburt's Will, 48 App. Div., 91; 62 N. Y. Supp., 698; or exclusion of son,—*in re* Loennecker's Will, 112 Wis., 461; 88 N. W. R., 215; Heath *v.* Koch, 74 App. Div. (N. Y.), 338; 77 Supp., 513.

Beneficiary attorney or draughtsman of will or relative of draughtsman, —*in re* Yorke's Est., 6 Pa. Dist. R., 321; *in re* Adams's Est., 201 Pa. St., 502; 51 Atl. R., 368; Clarke *v.* Schell, 84 Hun, 28; 31 Supp., 1053; *in re* Suydam's Will, 84 Hun, 514; 23 Supp., 449; Contrary intimation in Donovan *v.* Bromley, 71 N. W. R., 523 (Mich.); *in re* Logan's Est., 195 Pa. St., 282; 45 Atl. R., 729.

Beneficiary nurse, housekeeper, and friend,—Richardson *v.* Bly (Mass.), 63 N. E. R., 3.

Beneficiary testator's physician,—*in re* Cornell's Will, 163 N. Y., 608; 57 N. E. R., 1107; *in re* Adams's Est., 201 Pa. St., 502; 51 Atl. R., 368.

Beneficiary testator's partner,—Goodbar *v.* Lidikay, 136 Ind., 1; 35 N. E. R., 691; Koegel *v.* Egner, 54 N. J. Eq., 623; 35 Atl. R., 394.

Beneficiary a stranger, and relatives excluded,—Chandler *v.* Jost, 96 Ala., 596; 11 So. Rep., 636; Sullivan *v.* Foley, 112 Mich., 1; 70 N. W. Rep., 322; Miles *v.* Treanor, 194 Pa. St., 430; 45 Atl. R., 368; Henry *v.* Hall, 106 Ala., 84; 17 So. Rep., 187; Clarke *v.* Schell, 84 Hun (N. Y.), 28; 31 N. Y. Supp., 1053.

Illicit relations between testator and beneficiary,—*in re* Gordon's Est., 28 Pittsb. L. J. (N. S.), 78; *in re* Rand's Will, 28 Misc. (N. Y.), 465;

In fact it may be stated as a general rule that the courts do not set aside wills on the ground of undue influence upon slender proof; do not indulge in merely speculative presumptions.

Where the facts themselves were such as to raise a presumption of undue influence, that presumption will in time be overcome by the event that, with an opportunity to revoke, the testator by his declarations showed that his will conformed to his wishes.[1] But the presumption was said not to be overcome by lapse of time, where the will meanwhile remained in the custody of beneficiary's husband, and it did not appear that testator's attention was called to it, or that he remembered it.[2] Where, however, the alleged undue influence was that of a wife, since deceased, failure to revoke or change after her death was accorded weight in determining that there was no undue influence.[3]

BURDEN OF PROOF OF INSANITY; WHERE IT LIES AND HOW IT IS MET.

Every act is presumed to have been sanely done until the contrary appears by evidence.[4] And the contrary is not made to appear by merely showing the possibility of an unsound mental condition.[5]

Even in criminal cases, according to the rule in many States,

59 Supp., 1082; *in re* Westerman's Will, 29 Misc. (N. Y.), 409; 61 Supp., 1065; *in re* Welford's Will (N. J. Prc.), 51 Atl. R., 501; though in connection with other circumstances such relations may be a strong indication of undue influence,—Waters *v.* Reed, 8 Detr. Leg. N. (Mich.), 899; 88 N. W. R., 394.

Beneficiary priest of testator,—*in re* Sparks's Will, 51 Atl. R., 118 (N. J. Prc.).

Beneficiary a distant relative, though heirs excluded,—Hegney *v.* Head, 126 Mo., 619; 29 S. W. R., 587.

Beneficiary a religious or eleemosynary institution, where testator persuaded by one interested in it,—*ibid.*; Barkley *v.* Barkley Cemetery Assn., 153 Mo., 300; 54 S. W. R., 482.

In re Spellier's Est. (Pa. Orph. Ct.), 2 Pa. Dist. Rep., 513, the will was drawn by an attorney, personal friend of testator, and made provision for the attorney, but revoked a prior will making greater provision for the same attorney; *held* that undue influence was not shown by the facts.

Undue influence is not established by showing that one of the executors, who was also residuary legatee in case certain doubtful trusts should fail, drew the will, was testatrix's personal friend, advised her about her business and investments, where it also was shown that she was a person of strong mind and frequently refused to follow his advice. *In re* Edson's Will, 24 N. Y. Supp., 711, see also *supra*, p. 419 *et seq.*

[1] *In re* Reed's Will, 20 N. Y. Supp., 91; 2 Con. Surr., 403.

[2] Barbour *v.* Moore, 10 App. D. C., 30.

[3] Deck *v.* Deck, 106 Wis., 470; 82 N. W. R., 293.

[4] Commonwealth *v.* Woodley, 166 Pa. St., 463; 31 Atl. Rep., 202.

[5] State *v.* Novak (Iowa), 79 N. W. R., 465.

the burden is not met except by fairly *preponderating* evidence[1] of a reliable character,[2] or sufficient to establish insanity to the *reasonable satisfaction* of the jury.[3] It is not enough to raise a reasonable doubt as to the sanity of the accused. In other States it is said that if, after the defence has offered its proof of insanity, and the prosecution has offered its proof in rebuttal, a reasonable doubt remains as to the sanity of the accused, he is entitled to an acquittal.[4]

BURDEN OF PROOF IN CRIMINAL CASES.

In criminal cases the burden of proving the accused insane, if insanity is a defence, rests upon the defence, owing to the presumption of fact, drawn from human experience, that any man is sane. Theoretically, the burden of proving that the offence charged was committed by a person responsible for his acts is upon the prosecution. The prosecution may rest, however, upon the presumption of sanity without offering proof, and in case the defence of insanity is interposed the burden is on the defendant to establish it.[5]

In some States, as in New York, it is said that the affirmative remains with the prosecution until the end of the trial, and that the prosecution must satisfy the jury of the guilt of the prisoner, which includes his capacity to commit crime, upon the whole evidence.[6] In Mississippi it has been said that the burden of proving insanity is not on the accused, but the burden of proving

[1] State *v.* Novak (Iowa), 79 N. W. Rep., 465; Commonwealth *v.* Heidler, 191 Pa. St., 375; 43 Atl. R., 211; 44 W. N. C., 310; Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. Rep., 542; 43 W. N. C., 506; Commonwealth *v.* Berchine, 168 Pa. St., 603; 32 Atl. Rep., 109; *contra* Knights *v.* State, 78 N. W. Rep., 508; 58 Neb., 225. But see further discussion of this question *infra*, p. 558.

[2] See p. 559.

[3] See *infra*, p. 560. State *v.* Brooks (Mont.), 57 Pac. R., 1038.

[4] *Infra*, p. 559.

[5] People *v.* Ward, 105 Cal., 335; 38 Pac. R., 945; People *v.* McCarthy, 115 Cal., 255; 46 Pac. R., 1073; People *v.* Hettiek, 126 Cal., 425; 58 Pac. R., 918; State *v.* Cole, 2 Penne. (Del.), 344; 45 Atl. R., 391; State *v.* Hand, 1 Marv. (Del.), 545; 41 Atl. R., 192; Armstrong *v.* State, 30 Fla., 170; 11 So. R., 618; Jamison *v.* People, 145 Ill., 357; 34 N. E. R., 486; State *v.* Clements, 47 La. Ann., 1088; 17 So. R., 502; State *v.* Scott, 49 La. Ann., 253; 21 So. R., 271; State *v.* Schaefer, 116 Mo., 96; 22 S. W. R., 449; State *v.* Agnew, 10 N. J. Law J., 165; State *v.* Graves, 5 N. J. Law J., 54; Faulkner *v.* Ty., 6 New Mex., 464; 30 Pac. R., 905; Commonwealth *v.* Gerade, 23 Pittsb. L. J., 117; Commonwealth *v.* Kilpatriek (Pa.), 53 Atl. R., 774; and cases cited below.

[6] Brotherton *v.* People, 75 N. Y., 159; O'Connell *v.* People, 87 N. Y., 377; *cf.* Ford *v.* State, 73 Miss., 734; 19 So. R., 665; Knights *v.* State, 58 Neb., 225; 78 N. W. R., 508.

sanity is on the prosecution; but that in the absence of any evidence the prosecution's burden is met by the presumption of sanity.[1] These distinctions seem to be of words rather than of substance; the fact remains that the defence has the affirmative of the issue of insanity.

In Missouri a distinction has been attempted between the burden of proof in cases of imbecility and in cases of chronic insanity, in respect to the proof of a lucid interval. In the case of imbecility the burden of proof is not on the State to prove a lucid interval, but it seems it would be in a case of chronic insanity. This theory appears to belong to the pseudo-scientific class.[2]

Confusion has arisen, however, from the failure to distinguish the burden of proof from the method of meeting it. We believe the sound theory to be that the burden of proving the commission of the offence, including mental capacity to commit it, rests upon the prosecution throughout. The presumption of sanity is in a way evidence, but only *prima facie* evidence, of sanity; and although it suffices in the absence of any proof to the contrary, yet upon substantial, credible evidence of irresponsibility being offered, the presumption should vanish and not be again heard of on the trial. If the prosecution succeeds, it does so because it produces direct evidence of sanity. Nevertheless, many judicial opinions have given countenance to the theory that the effect of the presumption of sanity is to shift permanently the burden of proof; and this theory has had an indirect, but considerable influence upon the determination of a more vital question: How strong must the proof of irresponsibility be to entitle the prisoner to an acquittal?

Quantum of Evidence of Insanity.—The decisions greatly differ as to the weight of evidence sufficient to establish the defence of insanity. When the issue of insanity has been tried, and both sides, or the prisoner alone, has offered evidence on the issue, what rule shall be applied to determine whether the defence has been made out?

It is a rule of the common law of England, adopted throughout the United States, that the burden is on the prosecution to establish the guilt of the accused beyond a reasonable doubt.

[1] Ford *v.* State, 73 Miss., 734; 19 So. R., 665

[2] State *v.* Palmer, 161 Mo., 152; 61 S. W. R., 651.

In some States, however, it has been held that the rule of reasonable doubt has no application to the defence of insanity.[1]

Rule of Reasonable Doubt as to Sanity.—It is quite generally held that if from all the proof there is reasonable doubt as to defendant's sanity he is entitled to the benefit of the doubt, and consequently to an acquittal. But there are conflicting expressions even by the same court in the same State.[2]

The rule is sometimes stated with qualifications. In Florida, if evidence is given tending to show insanity, this must be considered in connection with the presumption of sanity by the jury; the State holds the affirmative, and if there is a reasonable doubt of sanity accused should be acquitted.[3] But, nevertheless, the

[1] California: the doctrine of reasonable doubt has no application to an issue of sanity of the accused; People *v.* Ward, 105 Cal. 335; 38 Pac. R., 945; People *v.* Barthleman, 120 Cal., 7; 52 Pac. R., 112. Texas: the burden is not on the State to prove defendant's sanity beyond a reasonable doubt; Burt *v.* State, 38 Tex. Cr., 397; 40 S. W. R., 1000; Williams *v.* State, 37 Tex. Cr., 348; 39 S. W. R., 687; Wheatly *v.* State, 39 S. W. R., 67; *cf.* Hurst *v.* State, 50 S. W. R., 719. Kentucky: Portwood *v.* Commonwealth, 20 Ky. L. R., 680; 47 S. W. R., 339. Pennsylvania: Commonwealth *v.* Heidler, 191 Pa. St., 375; 43 Atl. R., 211; 44 W. N. C., 310. Alabama: Martin *v.* State, 119 Ala., 1; 25 So. R., 255. Ohio: It is not enough to show merely that insanity is a possibility; State *v.* Miller, 7 Ohio N. P., 458; 5 Ohio S. and C. P. Dec., 703.

[2] Davis *v.* U. S., 160 U. S. 469; 16 Sup. Ct. Dec., 353; Irving Stuart *v.* State, 1 Baxt., 178; King *v.* State, 91 Tenn., 617; 20 S. W. Rep., 169; Faulkner *v.* Territory (N. M.), 30 Pac. Rep., 905; 6 N.M., 464; State *v.* Schaefer, 116 Mo., 96; 22 S. W. Rep., 447; Com. *v.* Gerade, 145 Pa. St., 289 (Pa. O. and T.); 22 Atl. Rep., 464; 23 Pittsb. L. J., 117; People *v.* Bemmerly, 98 Cal., 299; 33 Pac. Rep., 263; Armstrong *v* State, 30 Fla., 170; 11 So. Rep., 618; and 27 Fla., 366; 9 So. Rep., 1; State *v.* Davis, 109 N. C., 780; 14 S. E. Rep., 55; Moore *v.* Com., 92 Ky., 630; 18 S. W. Rep., 833; Montag *v.* People, 141 Ill., 75; 30 N. E. Rep., 887; Fiseher *v.* State, 30 Tex. App., 502; 18 S. W. Rep., 90; Hunt *v.* State (Tex. Cr. App.), 26 S. W. Rep., 206; People *v.* Dillon, 8 Utah, 92; 30 Pac. Rep., 150; Smith *v.* State, 31 Tex. Cr. Ap., 14; 19 S. W. Rep., 252; Miller *v.* State (Wyo.), 29 Pac. Rep., 186; State *v.* Zorn, 22 Ore., 591; 30 Pac. Rep., 317; Revoir *v.* State, 82 Wis., 295; 52 N. W. Rep., 84; Smith *v.* Com., 93 Ky., 318; 17 S. W. Rep., 868; People *v.* McNulty, 93 Cal., 437; 36 Pac. Rep., 597; People *v.* Bawden, 90 Cal., 195; 27 Pac. Rep., 204; People *v.* Eubanks, 86 Cal., 295; 24 Pac. Rep., 1014; State *v.* Hill, 46 La. Ann., 27; 14 So. Rep., 294; State *v.* Hansen, 25 Ore., 391; 36 Pac. Rep., 296; Kearney *v.* State, 68 Miss., 233; 9 So. Rep., 292; Hunt *v.* State (Tex. Cr. App.), 28 S. W. Rep., 206; Blummer *v.* State (Ind.), 34 N. E. Rep., 968; Jamison *v.* People, 145 Ill., 357; 34 N. E. Rep., 486; Bolling *v.* State, 54 Ark., 588; 16 S. W. Rep., 658; Lovegrove *v.* State, 31 Tex. Cr. R., 491; 21 S. W. Rep., 191; People *v.* Taylor, 138 N. Y., 398; 34 N. E. Rep., 275; People *v.* Nino, 149 N. Y., 317; 43 N. E. Rep., 853; Stuart *v.* State, 1 Baxt. (Tenn.), 178; King *v.* State, 91 Tenn., 617; 20 S. W. Rep., 169; State *v.* Larkins (Idaho), 47 Pac. Rep., 945; Ryder *v.* State, 100 Ga., 528; 38 L. R. A., 721; 28 S. E. Rep., 246; Brown *v.* State, 25 So. Rep., 63; 40 Fla., 459; Caffey *v.* State (Miss.), 24 So. Rep., 315; State *v.* Brooks, 57 Pac. Rep., 1038; 23 Mont., 146.

[3] Brown *v.* State, 40 Fla., 459; 25 So. Rep., 63.

commission of a revolting crime is not alone sufficient to overcome the presumption of sanity.[1]

In Oklahoma the burden is on the defendant to raise a reasonable doubt, and then the prosecution must prove his sanity beyond a reasonable doubt.[2]

Rule of Preponderance of Evidence.—The cases cited in the note[3] hold that insanity must be shown by the defence by a preponderance of evidence. Evidence sufficient to show a probability of insanity meets the requirement of a preponderance.[4]

In Montana, it has been held, that the *prosecution* must prove *sanity* by a preponderance of evidence, if the defence offers evidence tending to prove insanity.[5] The same rule obtains in Nebraska.[6]

Insanity when established as a fact, and of the character to excuse responsibility, is not a partial, but a complete defence and requires an acquittal.[7] Therefore, in States where the defence must do more than raise a reasonable doubt as to sanity, a mere reasonable doubt of sanity does not reduce the degree of the crime.[8]

Rule of Satisfaction of Jury.—In Delaware, by the statute, unless insanity is established by the State's evidence, the accused must establish it by direct evidence, to the *satisfaction* of the jury.[9]

[1] Davis *v.* State (Fla.), 32 So. R., 822.

[2] Maas *v.* Territory, 10 Okl., 714; 63 Pac. R., 960.

[3] Keleh *v.* State (Ohio), 45 N. E. R., 6; Cottell *v.* State, 12 Ohio C. C. R., 467; 1 Ohio C. D., 472; People *v.* Allender, 48 Pac. Rep., 1014; 117 Cal., 81; State *v.* Bell, 136 Mo. 120; 37 S. W. Rep., 823; Commonwealth *v.* Heidler, 191 Pa. St., 375; 43 Atl. R., 211; 44 W. N. C., 310; State *v.* Robbins (Iowa), 80 N. W. R., 1061; State *v.* Parks, 93 Me., 208; 44 Atl. R., 899; State *v.* Del Bello, 8 Oh. S. and C. P. Dec., 455; People *v.* Travers, 88 Cal., 238; 26 Pac. Rep., 88; People *v.* Bemmerly, 33 Pac. Rep., 263; 98 Cal., 299; Fiseher *v.* State, 30 Tex. App., 502; Lovegrove *v.* State, 31 Tex. Cr. R., 491; 21 S. W. Rep., 191; People *v.* Ward, 105 Cal., 335; 38 Pac. Rep., 945; Keener *v.* State, 24 S. E. Rep., 28; 97 Ga., 388; Phelps *v.* Commonwealth, 17 Ky. Law R., 706; 32 S. W. Rep., 470. A preponderanee does not neeessarily follow from mere number of witnesses, Wade *v.* State (Tex. Cr. App.), 63 S. W. R., 878; though this may be a eontrolling element, where the witnesses are of like eredibility, Ketteman *v.* Metzger, 23 Ohio C. C., 61.

[4] Sharkey *v.* State, 2 O. C. D., 443.

[5] State *v.* Peel, 23 Mont., 358; 59 Pae. R., 169.

[6] Snider *v.* State, 56 Neb., 309; 76 N. W. Rep., 574.

[7] Commonwealth *v.* Hollinger, 190 Pa. St., 155; 42 Atl. Rep., 548.

[8] Commonwealth *v.* Wirebaek, 196 Pa. St., 138; 43 W. N. C., 506; 42 Atl. Rep., 542.

[9] State *v.* Cole, 2 Penne., 344; 45 Atl. R., 391.

And in Iowa the presumption of sanity is not overcome unless the evidence *clearly establishes* the fact.[1]

In New Jersey the evidence must satisfy the jury, but any satisfactory evidence will suffice.[2]

In Texas the insanity of defendant need not be established beyond a reasonable doubt, but only to the *reasonable satisfaction* of the jury.[3]

In Iowa an instruction was approved, perhaps with some hesitation, which told the jury that they were not *required* to find insanity except upon reliable evidence which *convinced* them that the fact was proven by a *fair preponderance* of all the evidence in the case bearing thereon.[4]

In Louisiana it is said that the proof of insanity should *satisfy* the jury that the accused was not sane at the time of the act charged.[5]

In Missouri a distinction has been made between proof beyond a reasonable doubt and proof to the *reasonable satisfaction* of the jury, and the latter adopted as the proof sufficient to establish insanity.[6]

In Georgia the phrase "*reasonable certainty*" has been applied to indicate the measure of the burden upon defendant of proving insanity, such reasonable certainty, however, being produced by a preponderance of evidence.[7]

Where the defence was intoxication, it was held, if the jury were satisfied beyond a reasonable doubt that the accused had committed the act charged (larceny) then the burden was on the accused to show that the intoxication was so complete as to render him irresponsible.[8]

Illustrative Cases—Conflict of Evidence.[9]—In a murder case in Texas, the evidence showed that relatives of the accused were insane; physicians who had attended the ac-

[1] State *v.* Novak, 79 N. W. R., 465.

[2] Genz *v.* State, 34 Atl. R., 816; 58 N. J. Law, 482; 37 Atl. R., 69; 59 N. J. Law, 488.

[3] Williams *v.* State, 37 Tex. Cr., 348; 39 S. W. Rep., 687. See also Burt *v.* State (Tex. Cr. Ap.), 38 Tex. Cr., 397; 40 S. W. Rep., 1000; Hurst *v.* State (Tex. Cr. Ap.), 50 S. W. Rep., 719; State *v.* Miller, 7 Ohio N. P., 458; 5 Ohio S. and C. P. Dec., 703.

[4] State *v.* Novak, 79 N. W. Rep., 465.

[5] State *v.* Scott, 49 La. Ann., 253; 21 So. Rep., 271.

[6] State *v.* Duestrow, 137 Mo., 44; 38 S. W. Rep., 554.

[7] Minder *v.* State, 113 Ga., 772; 39 S. E. R., 284.

[8] See *supra*, p. 481, for intoxication as a defence to crime. Davis *v.* State, 74 N. W. Rep., 599; 54 Neb., 177.

[9] For further illustrations see civil cases, *infra*, p. 564.

cused testified to acts tending to show insanity, and gave their opinions that he was insane; there was no evidence to show motive; on the other hand, other acquaintances expressed the opinion that he was sane, without giving substantial reasons, and two physicians, not specially qualified as experts in insanity, gave opinions that he was sane, based on their observations during the trial and on the testimony; *held*, that there was a preponderance of evidence that he was insane, and that the verdict of guilty was not supported by the evidence.[1]

In People *v.* Taylor[2] the court refused to set aside a verdict of guilty as against the evidence. The accused had been a convict, but of exemplary character for several years; had then assaulted his keeper with a hatchet without provocation; and was pronounced by the prison physician after six months' observation to be suffering from melancholia with homicidal tendencies. He was then transferred to an asylum for insane criminals, detained there for a year, and retransferred as not insane. In prison he became friendly with a convict, then showed hostility to him under the delusion that he had divulged a plan of escape, and frequently threatened to kill this fellow-convict. Afterward he became apparently reconciled to him, but on the next day killed him. He showed no emotion and expressed a desire to be "electrocuted." He had practised a pernicious habit which he believed had wrecked him physically and morally. Two physicians after examination pronounced him insane, and five experts after examination pronounced him sane. It was held that the verdict of the jury should stand, even though a reasonable doubt of sanity was sufficient to require acquittal.

In New York it was held insufficient to establish a reasonable doubt of insanity, that the defendant testified his mind was a blank from just before the killing, and others testified that he was nervous, irritable, and excited over the behavior of his wife, who for months had had improper relations with another to his

[1] McLeod *v.* State, 31 Tex. Cr. Rep., 331; 20 S. W. Rep., 749.

[2] 138 N. Y., 398; 34 N. E. Rep., 275. See also People *v.* Ferraro, 161 N. Y., 365; 55 N. E. Rep., 931; 14 N. Y. Cr. R., 266; Miller *v.* State, 3 Wyo., 657; Fisher *v.* State, 30 Tex. App., 502; State *v.* Brooks, 4 Wash. St., 328; 30 Pac., 147; State *v.* Zorn, 22 Or., 591; 30 Pac., 317; Revoir *v.* State, 82 Wis., 295; Lacy *v.* State, 30 Tex. App. 119; Taylor *v.* Commonwealth (Va.), 19 S. E. Rep., 739; State *v.* Dreher (Mo.), 38 S. W. Rep., 567, 137 Mo., 11; Commonwealth *v.* Wireback, 190 Pa. St., 138; 42 Atl. Rep., 542; 43 W. N. C., 506; People *v.* Crest, 168 N. Y., 19; 15 N. Y. Cr. R., 532; 60 N. E. R., 1057.

knowledge, without any attempt on his part to punish them during that time.[1]

In Pennsylvania the accused introduced evidence that he was an epileptic and that the tendency of that disease in an aggravated form is to weaken the intellectual powers. It did not show that his intellect was seriously impaired nor that he was affected on the day of the homicide. It was shown that he had had an attack of epilepsy about five weeks before. A witness who had known him five years had only twice seen him act irrationally. *Held*, insufficient to prove insanity.[2]

In Illinois it was held not sufficient to rebut the presumption of sanity, that defendant was queer in his ways, very nervous and excitable, and felt as if he was going crazy.[3] And evidence that he had been in an insane asylum and that some witnesses, both expert and non-expert, were of the opinion that he was still insane was not sufficient to reverse a conviction where there was evidence that he earned regular wages, invested them, and attended to his affairs properly.[4]

Burden of Proof of Continuance of Insanity.[5]—The courts of many States hold that where the evidence shows that defendant was at any time previous to the crime affected with insanity of a chronic character, the presumption is that he continued so and had no lucid intervals, and the burden of proof is then upon the State to show that the crime was committed during a lucid interval.[6] But in Missouri a distinction is made between imbecility and chronic insanity, the burden of proving a lucid interval being on the State in the latter case, and not in the former.[7]

In Texas, however, it was said that an adjudication of insanity, though conclusive that defendant was then insane, does not raise any presumption that the insanity was permanent, but is simply to be considered with the other evidence on the question whether the accused was insane at the time of the crime, and

[1] People *v.* Osmond, 138 N. Y., 80; 33 N. E. Rep., 739.

[2] Commonwealth *v.* Bueeieri, 153 Pa. St., 535; 26 Atl. Rep., 228; 32 W. N. C., 113. *Cf.* Commonwealth *v.* Preston, 188 Pa. St., 429; 41 Atl. Rep., 534.

[3] Lilly *v.* People, 148 Ill., 467; 36 N. E. Rep., 95.

[4] Meyer *v.* People, 156 Ill., 126; 40 N. E. Rep., 490.

[5] See also *supra*, p. 551.

[6] State *v.* Sehaefer, 116 Mo., 96; 22 S. W. R., 447; Armstrong *v.* State, 30 Fla., 170; 11 So. Rep., 618; People *v.* Lane, 100 Cal., 379; 34 Pac. Rep., 856.

[7] State *v.* Palmer, 161 Mo., 152; 61 S. W. R., 651.

therefore that an instruction was properly refused that "unless the evidence shows beyond a reasonable doubt that the insanity was temporary and that defendant has been cured, it is presumed to have continued until now."[1]

Where the evidence shows merely temporary insanity prior to a homicide, without other facts to create a reasonable doubt whether the accused was sane at the time of the homicide, the State may rely upon the presumption of sanity without proving a lucid interval, though it would be otherwise if the insanity were of an habitual character.[2] And it was said in Missouri that though the accused shows that he was insane prior to a homicide, still the burden is upon him to prove his insanity at the time of the killing.[3]

BURDEN OF PROOF OF INSANITY IN CIVIL CASES.

Upon the question of insanity, though the burden of proof of all issues may be upon the plaintiff or moving party, the presumption of sanity[4] aids the person who relies upon it to the extent that the burden of proving insanity is upon the party who asserts it.[5]

Inquisitions of Lunacy.—The presumption of sanity is applied in such inquiries, and the burden is on him who alleges incompetency.[6] But one who attacks for fraud the validity of

[1] Hunt *v.* State, 33 Tex. Cr., 252; 26 S. W. Rep., 206. See also People *v.* Schmitt, 106 Cal., 48; 39 Pac. Rep., 204.

[2] Ford *v.* State, 73 Miss., 734; 19 So. Rep., 665.

[3] State *v.* Wright, 134 Mo., 404; 35 S. W. Rep., 1145. *Cf.* State *v.* Palmer, 161 Mo., 152; 61 S. W. R., 651.

[4] Presumption of sanity, Buckey *v.* Buckey, 38 W. Va., 168; 18 S. E. Rep., 383.

[5] Youn *v.* Lamont, 56 Minn., 216; 57 N. W. Rep., 478 (mortgage—insanity of mortgagor, burden on person disputing validity of mortgage); Nonnemacher *v.* Nonnemacher, 159 Pa. St., 634; 28 Atl. Rep., 439 (marriage—burden on person asserting insanity at time of marriage); Smith *v.* McClure, 146 Ind., 123; 44 N. E. Rep., 1004 (action to set aside judgment on ground of insanity of judgment debtor, burden on judgment debtor seeking to set judgment aside); Butters *v.* Comyns, 81 Ill. App., 418 (on conservator seeking to set aside judgment entered against his ward before his appointment); Clarke *v.* Irwin (Neb.), 88 N. W. R., 783 (burden of proving insanity of true owner is on him who seeks to recover in ejectment against him who claims by adverse possession against him); Carter *v.* Stewart (Tenn. Ch. App.), 43 S. W. Rep., 366 (burden of proving suspension of statute of limitation on him who asserts it).

[6] *In re* Shelleig, 11 Ohio S. and C. P. Dec., 81. See *in re* Welch, 108 Wis., 387; 84 N. W. Rep., 550, rent of farm for less than value does not prove incompetency of owner.

an adjudication of lunacy against him has the burden of proof.[1] And one who attempts to supersede an adjudication of incompetency has the burden of proof of a changed or restored condition of mind.[2]

WILLS.

Burden of Proving Sanity by the Prevailing Rule *Prima Facie* on Proponents.—Contrary to the usual rule in other legal contests (that the presumption of sanity casts the burden of proof throughout a trial on those who allege insanity), in proving a will, the burden of showing testamentary capacity and an intelligent knowledge of the contents of the will[3] is, in most States, upon the proponents of the will[4] in the first instance, or upon those alleging its validity.[5] This is so held, because the right to make a testamentary disposition of property is regarded as a privilege accorded by the State to those competent only, and hence, from considerations of public policy the statutes or the practice usually require the proponents to prove by actual evidence at least a *prima facie* case of mental competency, before probate can be allowed.

Shifting of the Burden of Proof to Contestants.—Generally where the burden of proving competency is *prima facie* on the proponents, it is met in the first instance by the testimony of the attesting witnesses to the will;[6] their testimony being at most confined

[1] McCormick *v.* McCormick (Iowa), 81 N. W. Rep., 172.

[2] Appeal of Thompson, 16 Montg. Co. Law Rep. (Pa.), 102.

[3] *In re* De Castro's Will, 32 Misc. R., 193; 66 N. Y. Supp., 239.

[4] Johnson *v.* Stevens, 15 Ky. Law R., 477; 23 S. W. Rep., 957; Prather *v.* McClelland (Tex. Civ. App.), 26 S. W. Rep., 657; Murry *v.* Hennessy (Neb.), 67 N. W. Rep , 470; Sheehan *v.* Kearney (Miss.), 21 So. Rep , 41; 35 L R. A., 102; *in re* Thomson, 92 Me., 563; 43 Atl. Rep., 511; *in re* Baldwin's Est., 13 Wash., 666; 43 Pac. Rep., 934; *in re* Griffin's Est., 9 Pa. Dist. R., 248; 23 Pa. Co. Ct. R., 559; Bacon *v.* Bacon (Mass.), 62 N. E. R., 990; Delafield *v.* Parish, 25 N. Y., 29; *In re* Widmayer, 74 App. Div. (N. Y.), 336; 77 N. Y. Supp., 663.

[5] Held in California, notwithstanding the will had already been admitted to probate, that in a contest of its validity its previous probate did not cast upon contestants the burden of proving mental incapacity, Clements *v.* McGinn, 33 Pac. Rep., 920. In New York in an action to establish the validity or invalidity of a will after probate, the probate is given *prima facie* effect in an action under sec. 2653a, Code Civ. Pro., and in such action the burden of establishing incompetency is on the contestant, Dobie *v.* Armstrong, 27 App. Div., 520; 50 N. Y. Supp., 801. See *in re* Rintelen, 37 Misc R., 462 (N. Y. Surr.); 75 N. Y. Supp., 935, where testator was a confirmed inebriate, there was no evidence that he dictated the will or understood its contents, and probate was refused.

[6] Or, under a special practice, by

to the appearance, conduct, and surroundings of the testator at the time of the execution of the will and their opinions based thereon. A presumption then arises in proponent's favor, which controls unless overcome by a preponderance of evidence in favor of the contestants.[1] The burden, having been thus shifted, remains to the end, in most States, upon the contestants.

In Ohio a *prima facie* case of testamentary capacity entitles the will to probate unless the contestants sustain their contention by a preponderance of proof.[2] And in Illinois it is said that when the proponents have made a *prima facie* case by statutory proof of due execution and of testator's mental capacity, the legal presumption of testator's sanity casts on contestants the burden of proving the contrary.[3]

In Some States Burden *Prima Facie* on Contestants.—In some States it is said that the proponents need not make any proof of the testator's mental capacity, that is, none other than follows as an inference from the presumption of capacity and the proof of due compliance with the formalities of execution. The issue of incompetency must be tendered by the contestants. In these States the situation is the same, so far as the contestants are concerned, as in those States where the burden shifts after *prima facie* proof by the proponents, the only im-

the production of the will, with the certificate of oaths of the subscribing witnesses, and the testimony in court of one witness. Johnson *v.* Johnson, 187 Ill., 86; 58 N. E. R., 237.

[1] *In re* Barber's Estate, 63 Conn., 393; 27 Atl. R., 973; Perkins *v.* Perkins, 39 N. H., 163; Elliot *v.* Welby, 13 Mo. App., 19; Taff *v.* Hosmer, 14 Mich., 309; McGinnis *v.* Dempsey, 27 *id.*, 363; Dean *v.* Dean, 27 Vt., 746; Turner *v.* Cook, 36 Ind., 129; Irish *v.* Newell, 62 Ill., 196; Carpenter *v.* Calvert, 83 *id.*, 62; Hawkins *v.* Grimes, 13 B. Monroe (Ky.), 257; Brooks *v.* Barrett, 7 Pick. (Mass.), 94; Mayo *v.* Jones, 78 N. C., 402; Kingsley *v.* Blanchard, 66 Barb., 317; Banker *v.* Banker, 63 N. Y., 409. And so is the English rule: Smee *v.* Smee, L. R., 5 P. D., 84, and cases cited.

[2] Beresford *v.* Stanley, 6 Ohio N. P., 38; *in re* Ludlow's Will, 6 Ohio Dec., 344; 4 Ohio N. P., 155.

[3] Craig *v.* Southard, 162 Ill., 209; 44 N. E. R., 393; Huggins *v.* Drury, 192 Ill., 528; 61 N. E. R., 652; Thompson *v.* Bennett, 194 Ill., 57; 62 N. E. R., 321. Though some of the Illinois decisions mention the shifting of the burden after the production of certain evidence, others remark that it is technically inaccurate to say that the burden is shifted during the trial; the burden remains where it is at the start, though at various stages of the trial it may appear, by reason of the testimony, to have been more or less fully met, accordingly as the evidence for or against the proponents or contestants preponderates at the moment. It is, therefore, inaccurate to instruct the jury that after certain evidence the burden shifts; but such instruction is not necessarily misleading. Slingloff *v.* Bruner, 174 Ill., 561; 51 N. E. R., 772.

portant difference being that in the latter the proponents of any will, whether there is a contest or not, must offer some direct proof of competency. Thereafter the contestants must sustain their case by a preponderance of proof.[1]

In the States where the proponents need not offer even *prima facie* proof of the testator's sanity, emphasis is laid upon the presumption of sanity, which, it is said, applies in probate proceedings as well as in other controversies.[2]

The presumption of sanity may be of sufficient probative force to turn the scale, when the evidence is evenly balanced.[3]

In Alabama it is said that all presumptions are in favor of the validity of the will, after the proponents have shown merely jurisdiction, testamentary age, and due execution.[4] And in Iowa, that on proof by proponent of due execution, the burden is on the contestants to show incompetency or undue influence.[5]

Effect of Unreasonableness of Will on Burden of Proof.—In Kentucky it seems to be indicated that the "burden" remains with the proponents until they have proved, *prima facie*, due execution merely, but is then shifted to the contestants to prove incapacity, *unless* the will presents internal evidence of irrationality, such as inconsistency in structure, language, or details.[6] In California precisely the contrary has been held: that the fact that the will is unreasonable does not so create a presumption of incapacity as to devolve upon the proponents the burden of explaining away the unreasonableness.[7]

Instructions to the Jury.—The jury on the issue of mental

[1] And the fact that the proponents do offer proof of capacity does not according to either rule affect the burden of proof. Proponents do not assume the burden by offering the evidence, Woodford *v.* Buckner, 32 Ky. L. R., 627; 63 S. W. R., 617.

[2] Alabama: Barnewall *v.* Murrell, 18 So. Rep., 831. Iowa: *In re* Allison's Est., 73 N. W. R., 489; 104 Iowa, 130; *in re* Goldthorp's Est., 88 N. W. R., 944; Howe *v.* Richards, 83 N. W. R., 909; *in re* Hull's Will, 89 N. W. R., 979. Indiana: Blough *v.* Parry, 144 Ind., 463; 43 N. E. R., 560; Roller *v.* Kling, 150 Ind., 159; 49 N. E. R., 948. Delaware: Smith *v.* Day (Del.), 45 Atl. R., 396. North Carolina: *In re* Burns's Will, 28 S. E. R., 519. California: *In re* Motz's Est., 69 Pac. R., 294. Pennsylvania: Messner *v.* Elliott, 184 Pa. St., 41; 39 Atl. R., 46.

[3] Appeal of Sturdevant, 71 Conn., 392; 42 Atl. R., 70.

[4] Barnewall *v.* Murrell, 18 So. R., 831.

[5] *In re* Allison's Est., 104 Iowa, 130; 73 N. W. R., 489; Howe *v.* Richards, 83 N. W. R., 909; *in re* Goldthorp's Est., 88 N. W. R., 944; *in re* Hull's Est., 89 N. W. R., 979.

[6] King *v.* King (Ky.), 42 S. W. R., 317; Woodford *v.* Buckner, 23 Ky. L. R., 623; 63 S. W. R., 617; but see Boone *v.* Ritchie (Ky.), 53 S. W. R., 518.

[7] *In re* Black's Est., 132 Cal., 392; 64 Pac. R., 695.

incompetency in a case where the burden is on contestants should be instructed rather that they must find the paper the will of testator, unless he was of unsound mind when it was executed, than that they must believe deceased of sound mind before they can find the paper to be his will,[1] and care should be taken in such cases not so to phrase the instruction as to lead to the impression that the burden is on proponents.[2]

Presumption of Continuance of Insanity as Affecting Burden of Proof.—The rule as to burden of proof is so strictly applied in Indiana that where the testator was prior to making the will in a state of mental unsoundness apparently permanent, it was held that such proof did not cast upon the proponents the burden of proving that the will was executed during a lucid interval; the burden was on the contestants to show that the insanity persisted at the time of the execution of the will.[3]

In Alabama and elsewhere the rule has been more conservatively stated. It is not incumbent on proponents to show that a will was made in a lucid interval *until* contestants show mental incapacity of the testator.[4] When contestants show chronic imbecility or permanent insanity preceding the execution, the proponents must then prove an interval of competency.[5]

In any event, though it be found that a testator was insane prior to making a will, his insanity will not be presumed to have continued, unless it be found that it was habitual and fixed.[6] The continuance of insanity is not a presumption of law, but an inference of fact, and to warrant the inference, the insanity must be permanent in character.[7]

[1] Layer *v.* Layer, 22 Ky. Law Rep., 1936; 62 S. W. R., 15.

[2] See Woodford *v.* Buckner, 23 Ky. Law Rep., 627; 63 S. W. R., 617.

[3] Merriman *v.* Merriman, 153 Ind., 631; 55 N. E. R., 734.

[4] Murphree *v.* Senn, 107 Ala., 424; 18 So. Rep., 264.

[5] Von de Veld *v.* Judy, 143 Mo., 348; 44 S. W. Rep., 1117; Jones *v.* Collins, 94 Md., 403; 51 Atl. R., 398; but *cf.* Merriman *v.* Merriman, 153 Ind., 631; 55 N. E. Rep., 734.

[6] Johnson *v.* Armstrong (Ala.), 12 So. Rep., 72. See Nonnemacher *v.* Nonnemacher, 159 Pa. St., 634; 28 Atl. Rep., 439.

[7] Manley's Exrs. *v.* Staples (Vt.), 26 Atl. Rep., 630; Richardson *v.* Smart, 2 Mo. App. Repr., 1107. See Van Osdell *v.* Hyce (La.), 15 So. Rep., 19; 46 La. Ann., 387. In Rogers *v.* Armstrong Co. (Tex. Civ. App.), 30 S. W. Rep., 848, it was held error to instruct the jury that the law presumes that the grantor of a deed was sane, when there was evidence that he was insane at the time of its execution, for, it is said, his mental condition is then a question of fact. Where a grantor was proved to be mentally incompetent on the day of the execution of a deed, it was said to be a question of fact whether he was in the same mental condition several days afterward when the deed was delivered, Baxter *v.* Baxter, 76 Hun, 98; 27 N. Y. Supp., 834;

Partial Insanity, as Affecting Burden of Proof.—Where the contestants show monomania, it is not incumbent on the defendants to show by a preponderance of evidence that the monomania *did not* relate to matters which would affect testamentary capacity;[1] it merely behooves defendants to adduce sufficient evidence to prevent the preponderance from being in favor of the contention that it did relate to matters affecting capacity.[2]

Where the contestants rely on insane delusions to defeat the will, the burden is upon them on that issue,[3] and to prove that the will was the direct product of the delusions.[4]

Effect of Adjudication of Insanity is to Shift Burden of Proof to Proponents.—One under guardianship is presumed incapable of making a will.[5] But where a person had been adjudged insane and committed to an asylum from which he was subsequently discharged, it was held that the adjudication did not create a conclusive presumption of the continuance of the insanity.[6]

The Massachusetts Rule.—In Massachusetts the presumption of sanity applies until rebutted by contestants, but

and proof of temporary incapacity to make a will caused by bodily pain and physical weakness creates no presumption of the continuance of such incapacity; Taylor *v.* Pegram, 37 N. E. Rep., 837; 151 Ill., 106. In Louisiana it was held that where a will was made by the testator himself unaided by others, and its provisions were judicious, there follows a presumption that it was made in a lucid interval, though the testator was a person afflicted with insanity; and that the subsequent suicide of the testator, due to insanity, raises no presumption of insanity when the will was made. Succession of Bey, 15 So. Rep., 297; 46 La. Ann., 773. But, on the other hand, where in a suit to recover on promissory notes executed by maker claimed to have been insane at the time of the execution, it was shown that he was insane prior to the execution of the notes, the burden was on the plaintiff to show his capacity at the time of the execution, Ducker *v.* Whitson, 112 N. C., 44; 16 S. E. Rep., 854. See also *supra*, p. 563. And proof of a previous and subsequent lucid interval was insufficient to prove that grantor was sane at the time of the execution by him of a deed in dispute, Pike *v.* Pike, 104 Ala., 642; 16 So. Rep., 689. The transaction was itself not in accordance with the conduct of men of ordinary prudence and intelligence; it was held that the transaction was disproof of lucidity. *Ibid.*

[1] See *supra*, p. 396.

[2] Young *v.* Miller, 145 Ind., 652; 44 N. E. Rep., 757.

[3] *In re* Scott's Est., 128 Cal., 57; 60 Pac. R., 527.

[4] Jones *v.* Collins, 94 Md., 403; 51 Atl. R., 398.

[5] *In re* Lapham's Will, 19 Misc. (N. Y.), 71; 44 N. Y. Supp., 90; *in re* Hoope's Est., 174 Pa. St., 373; 34 Atl R., 603 (containing a learned discussion of the weight of the presumption and the conclusiveness of proof necessary to overcome it); see also *in re* Widmayer, 74 App. Div. (N. Y.), 336; 77 N. Y. Supp., 663.

[6] Mutual Life Ins. Co. *v.* Wiswell, 56 Kans., 765; 44 Pac. Rep., 996.

then the burden of showing capacity upon the whole evidence,[1] by a fair preponderance,[2] is on the proponents.

Propositions Respecting the Burden of Proof to Establish a Will, Announced in the Parish Will Case,[3] a Celebrated and Leading Case in New York.—A majority of the court concurred in the following legal propositions set forth in the opinion of Davies, J.:

"1. That in all cases the party propounding the will is bound to prove to the satisfaction of the court that the paper in question does declare the will of the deceased, and that the supposed testator was, at the time of making and publishing the document propounded as his will, of sound and disposing mind and memory.

"2. That this burden is not shifted during the progress of the trial, and is not removed by proof of the factum of the will, and the testamentary competency, by the attesting witnesses, but remains with the party setting up the will.

"3. That if, upon a careful and accurate consideration of all the evidence on both sides, the conscience of the court is not judicially satisfied that the paper in question does contain the last will of the deceased, the court is bound to pronounce its opinion that the instrument is not entitled to probate.

"4. That when it is sought to establish a posterior will, to overthrow a prior one made by the testator in health, and under circumstances of deliberation and care, and which is free from all suspicion, and when the subsequent will was made in enfeebled health and in hostility to the provisions of the first one; in such case the prior will is to prevail, unless he who sets up the subsequent one can satisfy the conscience of the Court of Probate that he has established a will. And also the prior will is to prevail unless the subsequent one is so proven to speak the testator's intentions as to leave no doubt that it does so speak them.

"5. That it is not the duty of the court to strain after probate nor in any case to grant it, where grave doubts remain unremoved, and great difficulties oppose themselves to so doing.

"6. That the heirs of a deceased person can rest securely upon the statutes of descents and distributions, and that the rights thus secured to them can only be divested by those claiming under the will and in hostility to them, by showing that the will

[1] Richardson *v.* Bly (Mass.), 63 N. E. R., 3.

[2] Fulton *v.* Umbehend (Mass.), 65 N. E. R., 829.

[3] Delafield *v.* Parish, 25 N. Y., 9.

was executed with the formalities required by law, and by a testator possessing a sound and disposing mind and memory."

The court also said:

"The maxim, *qui se scripsit hæredem*, has imposed by law an additional burden on those claiming to establish a will under circumstances which call for the application of that rule, and the court in such a case justly requires proof of a more clear and satisfactory character. Such a condition is exhibited by the testimony in the present case. The two codicils under consideration were exclusively for the benefit of Mrs. Parish, with the exception of the charitable gifts, and although they were not actually written by her, yet they were drawn up at her suggestion, upon her procurement, and by counsel employed by her. She prepared and gave the instructions for them, and in judgment of law they must be regarded as written by herself—*Facit per alium, facit per se.*"[1]

[1] In that case it appeared that the testator, Henry Parish, who was possessed of a large estate and had been a cultivated and refined gentleman, was in July, 1849, while in the apparent enjoyment of full health, stricken with an attack of paralysis, described by the physicians as "hemiplegia." He had made one will in 1842, while in full health, by which he practically divided his estate between his wife and her relatives and his own brothers and sisters. After the attack of paralysis in 1849, his wife was hardly ever absent from his presence, and she and her relatives were his constant attendants, to the exclusion almost wholly of his own relatives, with whom he to this period he had always lived on terms of intimacy and cordiality. In August, 1849, in September, 1853, and in June, 1854, codicils were prepared and executed by which the provisions of the original will of 1842 were changed so as to revoke the legacies and devises to his brothers and sisters and leave the bulk of the estate to his wife. It was claimed that during all the period after his attack of paralysis down to his death in March, 1856, he was unable to speak intelligibly or coherently, or to read or write, and that he frequently indecently exposed his person and was guilty of ungentlemanly and violent conduct, and could only indicate his wishes by gestures and peculiar sounds.

The court, in the prevailing opinion, by Davies, J., reviewed the evidence at length and laid great stress upon the significance of the entire change in the personal habits and character of the testator. It said: "The conviction on our mind is clear that these facts and circumstances show unerringly that the attack of July 19th obliterated the mental powers, the moral perceptions, the refined and gentle susceptibilities of Henry Parish; that after that period he ceased to be the mild, intelligent, and unruffled man he had been theretofore, and that thereafter he was not morally responsible for the unbecoming and ungentlemanly conduct he so frequently exhibited. He then ceased to be Henry Parish, and was no longer an accountable being.

"We find much less difficulty in reconciling our minds to this view of the case than to adopt the theory of the proponents, that Mr. Parish, up to the period of his death, possessed an unclouded intellect, retaining its pristine vigor and activity, was conscious of all that was transpiring around him, and understood all that was said to him; compre-

hended the minute details of the complicated and important business transacted for seven years in his name, and often in his presence, and was capable of communicating and did communicate his thoughts and wishes to others. It is much easier for us to believe that those who, we doubt not honestly, think that Mr. Parish understood what was said to him, and that they comprehended the operations of his mind, and the expression of his wishes, are mistaken in their suppositions, than to reconcile his actions after his attack with the fact that he was still in possession of all his mental faculties.

"When the means of arriving at the knowledge whether Mr. Parish was understood or not are examined, it will be found that they were very imperfect and very liable to misapprehension. It is to be observed also that all who speak on this subject applied no test to determine the accuracy of their impressions. They saw Mr. Parish mainly when in apparent good physical health, and visited him under the impression and with the preconceived idea that he understood what was said to him, and they naturally construed the signs and gestures made by him as indications of intelligence and responsive to suggestions made by them.

"But the accustomed mode of conveying thought by speech was denied to Mr. Parish. Some of the witnesses think he made use of the words 'yes' and 'no' and one or two other words; but the weight of the testimony greatly preponderates in favor of the position that, after his attack, he never uttered an intelligible word. This is the testimony of Mr. Kernochan, who saw him more frequently than any other person other than members of the family. Mr. John Ward, whose intercourse with him was very frequent, says distinctly that he never heard him utter a distinct and intelligible word after his attack. He was therefore denied the usual manner of communicating his thoughts and wishes. What remained were signs and gestures and the expression of his face, to communicate with those around him. Some of the witnesses suppose that they obtained his meaning by the expression of his face. Now, it is to be remembered that the only agents conveying such expressions are the mouth and eyes. Mr. Parish had no use whatever of the former organ for this purpose. His face was always peculiarly unimpressive and undemonstrative, but after his attacks the muscles of his mouth became firm and rigid. His eyes afforded but little aid in this particular. He had nearly lost the sight of one of them, and the other was opaque by the operation of cataract, and both were generally covered by spectacles of great convexity. He could, therefore, neither speak nor use the muscles of his face to give expression to his thoughts, and the gestures made by him with the left hand and its fingers were irregular, unmeaning, and contradictory, and often conceded to be misunderstood.

"With these imperfect and uncertain media for ascertaining the thoughts of Mr. Parish, it is doing no injustice to any one to assume that they have been mistaken in supposing that they correctly understood him. We more naturally and readily come to this result, because we find that all who had any intercourse with Mr. Parish, on many occasions, found great difficulty in understanding his wishes and thoughts, if they even understood them at all; and the instances are frequent and clearly established where he often made affirmative and negative motion of his head immediately succeeding each other to the same question, leaving the inquirer in perplexity which he really intended. The testimony is conclusive that Mrs. Parish herself frequently acknowledged that she could not understand him, and there is some testimony tending to show that on some occasions at least she thought he did not at all understand what was said to him, and that, in her opinion, the effort would be useless to make him understand. . . ."

"All the testimony shows that he could only indicate with his fingers and hands, or by sounds, that he wanted something, or that something was the matter, and which motions or sounds were construed by those around him as evidences of his wish to put a question, whereupon

Burden of Proof as to Intoxication.

Where the defendant relies on intoxication to rebut malice, the burden of proof of such intoxication is upon him. And

they began to suggest various topics, and when they thought they perceived that they had hit upon the subject in his mind they supposed he wished to inquire about, they put such questions as suggested themselves to them, and to which they supposed they had received affirmative or negative answers. If Mr. Parish had no power to express a wish to destroy a will, it follows he had none to create one, and the manifestations of his wishes depended entirely upon the interpreter and the integrity of the interpretation. . . ."

"It is thus seen that great difficulties and uncertainty, to say the least of it, attended any expression of the thoughts or wishes of Mr. Parish, and that a large number of those having business or intercourse with him utterly failed to attach or obtain any meaning to his signs, sounds, motions, or gestures. The natural and obvious deductions to be made from all these facts and circumstances are that Mr. Parish had no ideas to communicate, or, if he had any, that the means of doing so, with certainty and beyond all cavil or doubt, were denied to him. If some, with the aid of an interpreter, and always the same, indulged the charitable thought that they correctly apprehended his wishes, it is clear that others, equally intelligent, with adequate and equal opportunities of judging, and with the same aids, utterly failed to comprehend him.

"The facts testified to are of such a character, giving full and proper weight to all the evidence, regarding it in the most favorable light to the proponents, as to leave great doubt on the mind that Mr. Parish, after his attack, was anything more than the creature of habit, the reflex of the opinions and wishes of others, the clay in the hands of the potter, to be moulded into any shape or form desired. His hearing was good; the sight of one of his eyes, although impaired, was not seriously affected, and he had the perfect use of his left hand and arm. Nothing was more natural, therefore, than that those who entertained the idea that he possessed intellect would resort to the obvious facilities and aids to enable him to give it expression. The power of speech, it is manifest, was denied to him; if he possessed any, it was exercised most imperfectly and with no practical advantage. This, the obvious and usual method of communicating thought, he had not. None could fail to know that, if Mr. Parish had thoughts, the great and controlling anxiety of his life would be to give them expression and to manifest them to his friends. Independently of the social gratification attendant upon such successful effort, he had great interests to manage, a large property to look after, and the accumulation and management of which had been the absorbing object of his life. A large estate had accumulated and was accumulating, which, if he knew anything, he must have known was taking a direction, as the proponents allege, hostile to his wishes, to those from whom he was alienated, and away from the cherished objects of his regard and affections. Every conceivable motive and consideration pressed upon him, therefore, to keep up intercourse with his family and friends, if the thing was possible. No man having the power thus to communicate, and having thoughts and wishes to express, thus circumstanced, would remain in a living grave for seven years without making superhuman efforts to be understood by those around him. Those friends rightly assumed, therefore, that Mr. Parish would be most solicitous to maintain intercourse with them, if it were possible to do so. The first attempt, and the most obvious one, was to have Mr. Parish write with his left hand. He had the perfect use of it; could write well; had done it all his life. We all know from experience how sim-

where defendant relies on delirium tremens as a defense, the burden is on him to show that it existed at the time of the act

ple this process is, and how easy of execution. We can see how effectual it would have been in enabling Mr. Parish to express his wishes and keep up his intercourse with his friends, and retain the management and control of his affairs, and make such disposition of his estate as he then desired. This expedient, though effectually tried and persistently urged upon Mr. Parish, utterly failed of accomplishing any satisfactory result. One of the witnesses thinks that, on one occasion, he succeeded in writing the word 'horse,' and the same witness says he wrote several times the word 'wills.' The latter efforts were preserved, and are produced and made exhibits in the cause. An inspection of them will show that there is no propriety in interpreting them as 'wills' or any other word. They are nothing but imperfect, unmeaning scrawls, such as any child might make who had strength to hold a pen. They unmistakably show that there was no mind to guide the hand, or, if there was any, not of sufficient force to control the will and second its determinations. If Mr. Parish had any mind capable of operation or of forming conclusions, his faculty of hearing remaining unimpaired, it would have been the easiest thing imaginable for him to have written the word 'yes' in response to any question he desired to answer in the affirmative, and the word 'no' to any he desired to answer in the negative. This could have been done with much less effort than was required to write the words 'horse' and 'wills.'

"This attempt to have Mr. Parish communicate by writing having proved fruitless, resort was had to block letters, a very simple and facile mode of communicating thought by those who are deprived of the natural use of doing so by speech. If he had any thoughts to communicate, he had thus at hand an easy, certain, and effective means of doing so with accuracy and beyond the peradventure of mistake. The slightest exertion only was required—no fatigue could ensue. This attempt also produced no results. Another effort was also made with the letters of the alphabet in another form, and it also was unsuccessful.

"A further and different mode was suggested by some of his friends, which, if the theory of some of the witnesses for the proponents is correct, afforded a safe, sure, and easy method of communication. It was the use of a dictionary by Mr. Parish. This process had two advantages; it would have enabled him to suggest topics of inquiry, and insured intelligent and certain answers to the questions put to him. A moment's reflection will satisfy any mind that no process could have been devised more certain and satisfactory than this for holding intercourse with an intelligent mind, denied to it the power of giving expressions to its emotions and thoughts in the form of speech. No results were obtained from this source, and the inference from the testimony is that no efforts were made to afford Mr. Parish the opportunity of trying this method of communicating his thoughts.

"And this omission greatly strengthens the impression conveyed by the testimony that he did not and could not read at all after his attack. It is true that he was seen to look at newspapers, accounts, ledgers, checkbooks, notes, etc.; but that his mind took in and comprehended what his visual organs discerned, the evidence in this case will not warrant us in assuming. It is natural to suppose that, if Mr. Parish could read, he would have desired himself to peruse these codicils, and they would have been placed before him for that purpose; and on the assumption that he could, the inquiry presses upon us, Why were they not given him for perusal? If it had been established that he could read intelligently, and it had appeared that these codicils had been read over by him, it would have furnished much more satisfactory evidence than any we now have that they expressed his wishes. If he could read, and had intellect to

charged.[1] Where a testatrix was intemperate and was very stupid on the day she made her will, before making it, but the person who drew it testified that she was competent and conscious, and subsequently she ratified the will by a codicil, and

understand what his eyes beheld, why is it that there is an entire absence of evidence that he was ever seen reading, with apparent understanding, a letter? of his ever having been seen, on any one occasion during his long confinement, with a book in his hand perusing it? Is it to be believed that, if Mr. Parish could read, that he would not, during those whole seven years, when he was almost entirely excluded from intercourse with the world, have once resorted to books for amusement and instruction? It is incredible. We all know that no greater solace is available to an invalid, and none more universally sought after. They are companions always at hand, of the most soothing, agreeable, and entertaining character, and it cannot be doubted that, if Mr. Parish could read and had intellecutal capacity sufficient to understand what he read, that books would have been his daily and constant companions.

"These views press themselves on us with great force, if we concur in the opinion of Dr. Taylor that Mr. Parish after his attack became a devout and sincere Christian, and was anxiously and inquiringly seeking to make his peace with his Maker, whom he must have expected soon to meet. Where would an intelligent Christian sooner turn for advice, direction, and consolation than to the Bible? This book, we all know, is printed in type, so that all, of any degree of vision, can peruse it. Nay, those totally deprived of sight are not precluded from resorting to it for comfort and direction. We have looked in vain through the testimony in this case to find any evidence that Mr. Parish ever read his Bible, that one was ever procured for him, or that any effort was ever made to induce him to peruse it, or that he ever indicated a wish to do so.

"To what result does this view of the facts and circumstances in this case, diverted to and commented on, lead the mind? On a careful consideration of them all, with a most anxious desire to arrive at a just and correct conclusion, we are clearly of the opinion that the attack of Mr. Parish on the 19th of July, 1849, extinguished his intellectual powers, so obliterated and blotted out his mental faculties that after that period he was not a man of sound mind and memory within the meaning and language of the statutes, and was therefore incompetent to make a will, and that the codicils of September, 1853, and of June, 1854, were not his will, and formed no part thereof."

Compare with the Parish case Mendenhall *v.* Tungate, 15 Ky. Law R., 639; 24 S. W. Rep., 431, where the incompetent testatrix was paralyzed, bedridden, and speechless except to say "yes," "no" and "well."

[1] Gate *v.* Hill, 46 La. Ann. 27, 14 So. Rep. 294; Commonwealth *v.* Woodley, 166 Pa. St. 463, 31 Atl. Rep. 202.

See Lang *v.* Ingalls Zinc Co. (Tenn. Civ. Ap.), 49 S. W. Rep. 288; Fidelity & Casualty Co. *v.* Chambers (Va.). 24 S. E. Rep. 896, for cases where there was a conflict of evidence upon the fact of intoxication.

See Maynard *v.* State (Tex. Cr. App.), 39 S. W. Rep. 667, for illustration of instruction where there was merely evidence that accused had been drinking and subsequently failed to remember.

See People *v.* Kloss, 115 Cal. 567, 47 Pac. 459, to effect that evidence of drinking the day previous to offence does not call for instruction on legal effect of intoxication.

See *In re* Woolsey's Will (Surr.), 17 Misc. Rep. 547, 41 N. Y. Supp. 263 —that testator drank on day he made will and that witness delivered to him three bottles of whiskey a few hours before he executed the will does not overcome testimony of other witnesses that he was sober when he made the will.

there was no evidence of her condition when she made the codicil, it was held that there was not in the evidence sufficient to rebut the presumptions arising from evidence of due attestation and execution, or to warrant sending the issue to the jury.[1]

[1] Cook v. White, 167 N. Y. 588, 60 N. E. R. 1109.
State v. Kavanaugh (Del.), 53 Atl. R. 335.
See also Baxter *v.* Baxter (N. Y.), 76 Hun, 98, 27 N. Y. S., 834 (1894); Buckey *v.* Buckey, 38 W. Va. 168, 18 S. E. 383.

CARE AND CUSTODY

OF

INCOMPETENT PERSONS

AND THEIR ESTATES.

BY

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SECOND EDITION

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CARE AND CUSTODY OF INCOMPETENT PERSONS AND THEIR ESTATES.

THE common law recognizes four forms of insanity, *viz.:* lunacy, idiocy, accidental loss of understanding, and deprivation of understanding by the subject's voluntary acts, as habitual drunkenness. Persons suffering from insanity are deemed by the law incapable of managing their own affairs. When a person becomes mentally disabled, from whatever cause the disability may arise, whether from sickness, vice, casualty, or old age, he is a fit and necessary subject of guardianship and protection.[1]

It may safely be assumed that madness subsists in every variety of shape and degree. It subsists in the maniac chained to the floor; in the patient afflicted with mental aberration on certain subjects, or on a certain subject only, and in respect to such even never betraying himself in violence or outrage. The affliction is the same in species in both cases, the difference being only in degree.[2] What constitutes such a degree of insanity as to justify the intervention of the law in protecting the property and person of the subject and in restraining his liberty, is to be determined by the legislature and the courts in their wise discretion.

The term *non compos mentis* is generic and was regarded as of absolute significance, denoting a total deprivation of sense. The court of chancery in England applying this meaning would not issue commissions *de lunatico inquirendo* unless the subject was insane within the technical definition prescribed by law.[3] This restricted meaning was followed in the earlier cases in the United States.[4] In the more modern cases these words are held to include not only cases of idiocy and lunacy, as defined at common law, but all cases of imbecility where the subject is incapable of conducting the ordinary affairs of life and liable to suffer in person and property from his own weaknesses.[5]

[1] *In re* Barker, 2 Johns. Ch. (N. Y.), 232.
[2] Deer *v.* Clark, 3 Add. Eec., 79.
[3] Case of Barmley, 3 Atk., 173.
[4] Case of Beaumont, 1 Wharton (Pa.), 52.
[5] Hamriek *v.* State, 34 N. E., 3; 134 Ind., 324.

Who Are Subject to Adjudication as Incompetent.—The legal test is the capacity to understand the nature and effect of ordinary transactions.[1] In McElroy's case[2] the Supreme Court of Pennsylvania held that the question for the jury on a traverse of an inquisition finding the party *non compos mentis* was whether the mind is deranged to such an extent as to disqualify the traverser from conducting himself with personal safety to himself and others, and from managing his own affairs and discharging his relative duties. This rule has been generally adopted in the more recent cases in the United States.[3] In New

[1] *Ex parte* Cranmer, 12 Vesey, Jr., 454.

[2] 6 W. and S. (Pa.), 451.

[3] See Carmichael, *in re*, 36 Ala., 514; Rowden *v.* Rowden, 28 Ala., 565; Hovey *v.* Chase, 52 Maine, 304; Blanchard *v.* Nestle, 3 Denio (N. Y.), 47; Stanton *v.* Wetherwax, 16 Barb. (N. Y.), 259; Rodgers, *in re*, 9 Abb. N. C. (N. Y.), 141; Greenwade *v.* Greenwade, 43 Md., 313; Kenworth *v.* Williams, 5 Ind., 375; Cochran *v.* Amsden, 104 Md., 282; Snyder *v.* Snyder (Ill.), 31 N. E., 303; Hamrick *v.* State, 34 N. E. (Ind.), 3; 134 Ind., 324; Emerick *v.* Emerick, 49 N. W. (Iowa), 1,017; Owings' case, 1 Bland, 386; 17 Am. Dec., 311; Johnson *v.* Safe Dep. & Tr. Co., 104 Md., 460; 65 Atl., 333; Gray *v.* Obear, 59 Ga., 675; *Re* Lindsey, 43 N. J. Eq., 9; 10 Atl., 549; Greenwade *v.* Greenwade, 43 Md., 315; McCamman *v.* Cunningham, 108 Ind., 545; 9 N. E., 455.

Mere weakness of mind, not amounting to lunacy, idiocy, or imbecility, will not justify an adjudication of incompetency. *In re* Rush, 53 N. Y. Supp., 581; *in re* Smith, 12 Pa. Super. Ct., 649; *in re* Wells, 67 N. Y. Supp., 631.— But where the statute provides for the appointment of a conservator of one insane and incapable to manage his affairs properly, a case is made out if one be so unsound mentally as to be unable to manage his property, even though he be not absolutely demented. Shapter *v.* Pillar, 63 Pac. R. (Colo.), 302. And where a statute authorizes the appointment of a guardian for an imbecile, the appointment may be made where one has become so infirm mentally that he cannot manage his affairs with sufficient capacity to preserve his property. *In re* Einswiler, 8 Ohio N. P., 132; 11 Ohio S. & C. P. Dec., 10. The evidence is sufficient to authorize the appointment of a committee when it shows timidity, weakness of mind, inarticulateness of utterance, inability to multiply simple numbers, waste of estate. Calderon *v.* Martin, 50 La. Ann., 1153; 23 So. R., 909; France *v.* Frantz, 4 Ohio N. P., 278. See also Commonwealth *v.* Hays, 195 Pa. St., 270; 45 Atl. R., 728; *in re* Smith, 12 Pa. Super. Ct., 649; Taylor *v.* Moore, 23 Ky. L. R., 1572; 65 S. W. R., 612; "What Should Be the Legal Requirements for the Commitment of Insane Persons to Hospitals for the Care of the Insane?" 63 Albany Law Jour., 441.

Habitual Intemperance.— The statutes usually provide also for the adjudication and guardianship of habitually intemperate persons. See Tome *v.* Stump, 42 Atl. R., 902; 89 Md., 264; *in re* Tarr's Estate, 10 Pa. Super. Ct., 554. In some States provision is made for the commitment of inebriates for treatment. *E.g.*, Massachusetts Pub. Stats., c. 87, §§ 12, 13; St. 1889, c. 414, § 7. Commitment of female inebriates to reformatory. New York City Consol. Act, § 1,466, subd. 1. In such cases the method of conducting the inquiry is a matter of local practice. See Niven *v.* Boland, 177 Mass., 11; 58 N. E. R., 282. A *habitual drunkard* has been judicially defined as one who is given to inebriety or excessive use of intox-

York it seems that a committee of property is not necessarily to be appointed in every case where the owner is not competent to manage some particular business enterprise; the question is whether he is able to manage the ordinary affairs of business and life.[1] And the appointment of a committee rests in the sound discretion of the court; not every case of mental weakness or impaired intellectual power will justify the court in assuming the care of the owner's property.[2]

The jurisdiction over the person and property of insane persons is vested in the State and rests upon its duty to protect the person and property of those who, because of weakness, are unable to care for themselves, and to prevent injury to the community from the acts of those not under the guidance of reason. This jurisdiction has been delegated in most instances by express provision of statute to the courts.

Such Statutes are Constitutional.—In Colorado the State Constitution contains a guaranty of the right to acquire and possess property; a statutory provision for the appointment of a conservator of the property of one so mentally unsound as to be unable properly to manage his property has been held not to be in derogation of this guaranty.[3]

The assumption by the courts of the care and management of a lunatic's property does not *deprive* him of his property, within the constitutional prohibition against deprivation of property without due process of law, and therefore no jury trial is requisite.[4]

Such authority usually includes the power to appoint a committee of the estate within a court's jurisdiction, of a non-resident lunatic;[5] and this exercise of judicial power has been sustained by the courts as constitutional.[6]

icating drinks, and who has, by frequent indulgence, lost the power or will to control his appetite for them. Litton *v.* Grand Lodge A.O.U.W., 84 Mo. App., 208.

[1] *In re* Williams, 24 App. Div., 247; 48 N. Y. Supp., 475; aff'd, 157 N. Y., 704; 52 N. E. R., 1,126.

[2] *In re* Burke, 110 N. Y. Supp., 1004; 125 App. Div., 889; Matter of Clark, 175 N. Y., 139; 67 N. E. R., 212.

[3] Shapter *v.* Pillar, 63 Pac. R., 302.

[4] Sporza *v.* German Savings Bank, 192 N. Y., 8; 84 N. E. R., 406.

[5] *Vide* statutes digested *infra*, pp. 606 *et seq.*

[6] Appointment of receiver for estate of non-resident. *In re* Barteline, 34 Misc. R. (N. Y.), 131, 9 N. Y. Ann. Cas., 448, 69 N. Y. Supp., 468; Beall *v.* Stokes, 95 Ga., 357, 22 S. E. R., 637; due process of law in such cases, Nobles *v.* Georgia, 168 Mass., 398.

Appointment of guardian of non-resident lunatic. Wallis *v.* Brown (N. J.), 52 Atl. R., 475. See "Foreign Curators of Lunatics and the English Courts," 36 Law J., 480.

In England the King, as *parens patriæ*, is considered to be invested with the care and control of all his subjects, who by reason of imbecility or want of understanding are incapable of taking care of themselves. This care and custody, as executed by him, falls under the direction of the court of chancery, by virtue of a standing warrant to the Lord Chancellor under the sign manual of the King.[1] In the United States the care and custody of the insane, if not otherwise specially and expressly provided for, are vested in the equity courts.[2] If such care and custody are vested by statute in some other tribunal, it is a much discussed question whether the chancery courts do not possess a concurrent jurisdiction.

In New York the statute gave the care and custody of the person and estates of lunatics, idiots, and habitual drunkards, without any restriction, to the court of chancery. It is now vested absolutely in the supreme court. In Pennsylvania the authority of the courts over lunatics is held not to be derived from the statutes conferring equity jurisdiction on the courts, but from the provisions of the constitution of the commonwealth. In South Carolina the care exercised by the court of chancery over the persons and property of insane persons is considered as a branch of the equity jurisdiction proper, and not, as in England, distinct from its functions as a court of equity.[3] In New Jersey the control of insane persons and their estates is committed by statute to an Orphan's Court; and in many States the entire jurisdiction is by statute or constitutional provision entrusted to the court of probate. However this jurisdiction may be exercised, there is no departure from the rules and principles adopted in like cases by the courts of chancery; and very generally the character of the committee, guardian, and conservator in the American courts is assimilated to that of the committee under the English system.[4] In the determination of matters relating to such care and custody, where rules of law and equity are conflicting, the equitable rules governing the case will control.[5]

A much wider jurisdiction over the property and estates of

[1] Eyre *v.* Shaftsbury, 2 P. Wms., 118; Burford *v.* Denthall, 2 Atk., 553.

[2] Sporza *v.* German Savings Bank, 192 N. Y., 8, 15; 84 N. E. R., 406; Matter of Traey, 1 Paige (N. Y.), 580; Mormon Church *v.* U. S., 136 U. S., 1.

[3] Ashley *v.* Holman, 15 S. C., 97.

[4] Hovey *v.* Harmon, 49 Maine, 269; Wheeler *v.* The State, 34 Ohio St., 394.

[5] Richards, *ex parte*, Brev. Vol. B. (S. C.), 375; Campbell *v.* Campbell, 39 Ala., 312.

Shapter *v.* Pillar, 63 Pac. R., 302.

insane persons obtains in the American courts than in the English courts of chancery; for while the possession vested in the committee appointed by the latter is that of a mere bailiff or agent, so that in the absence of express statutory authority neither the court nor the committee can alienate the property of the lunatic or satisfy the claims of his creditors, the courts in several of the United States have exclusive jurisdiction both to sell the lunatic's property and to determine and satisfy his just debts. In many States it is held that the courts of equity have an inherent power to order the sale of the personal and real estate of an insane person.[1]

In the States where the care and custody of the insane are committed by statute to the courts of probate and exercised by committees, guardians, or curators appointed by the court, the power of the court in respect to the property of the insane ward is generally the same as that exercised over the estates of minors; and the court may, upon the petition of the guardian, upon due notice and for good cause shown, order a sale of so much of the insane person's property as may be necessary for the payment of his debts or for the support and maintenance of himself or his family. This may also be done where it is shown to the satisfaction of the court that his real estate or interests therein may profitably be sold and the proceeds invested in productive personal property. This can only be done upon the application to the court of the guardian, committee, or trustee.[2]

Where there is no general jurisdiction conferred upon the court by statute or constitution, the jurisdiction is to be regarded as purely legislative, limited and special; that is, as far as the statute law confers jurisdiction on the court it may go, but no further.[3]

In New York the exclusive care and custody of the estates and persons of lunatics, idiots, and habitual drunkards is vested in the supreme court. Hence there arises a special and exclusive jurisdiction of the court, and it is charged with the duty of providing for the payment of the insane person's debts out of his estate, and of seeing that the equitable and legal rights of his creditors are protected and enforced. These rights are subject

[1] Dodge *v.* Cole (Ill.), 37 Am. Rep., 11; Palmer *v.* Garland, 81 Va., 444.

[2] Hamilton *v.* Traber, 27 At. (Md.), 229.

[3] Modawell *v.* Holmes, 40 Ala., 291; State *v.* Wilcox, 24 Minn., 143; North *v.* Joslin, 59 Mich., 624.

to the prior rights of the maintenance of the subject and his immediate family. In many of the States it is held that the estate of a lunatic cannot be subjected to legal process, for debts either incurred for his support as a lunatic or existing prior to his lunacy, but that his estate is to be administered only by order of the court having lunacy jurisdiction.[1] But in Pennsylvania any creditor of a lunatic may litigate his claim in a court of law, after due notice given to the committee, and such a suit brought in good faith will be conclusive as to the amount and merit of such claim. But the creditor, having obtained judgment, may not levy execution upon the insane person's property in the hands of the committee, his sole remedy being an application to the court, which will order the committee to raise and pay over the funds necessary to satisfy the judgment.[2]

THE INQUISITION.

In England and the United States it is the ordinary practice to issue a commission out of the court having jurisdiction in the nature of a writ *de lunatico inquirendo*, to inquire into a case of alleged insanity. The issuing of the commission is at all times in the discretion of the court. If the procedure is prescribed by statute, it must be strictly followed.[3] Ordinarily the court does not acquire jurisdiction to adjudicate the question of insanity until the requirements of the statute preliminary to the granting of the inquest are met.[4] In Delaware a different rule seems to govern. In that State the court of chancery by special legislation assumes jurisdiction of an alleged lunatic from the inception of the proceedings by which his sanity or insanity is to be finally and definitely ascertained, and has power to restrain him from exercising control over his property pending the proceedings. The presumption of sanity which obtains in such proceedings must remain in abeyance so far as it relates to the temporary restraint of the personal liberty of the alleged insane person.[5]

NOTICE.—In most of the States it is generally held that the party alleged to be insane has the right to have notice of, and be present at, the proceedings instituted for determining the issue

[1] Smith *v.* Pipkin, 77 N. C., 569; Balke *v.* Rerpass, *ibid.*, 193.
[2] Ecksine's Estate, 1 Clark, 224; Guthrie's Appeal, 16 Penn. St., 321.
[3] State *v.* Beard, 47 Mo., 301.
[4] Hallet *v.* Patrick, 49 Cal., 590.
[5] *Re* Harris (Del.), 28 Atl., 329.

of insanity.[1] If there are any circumstances in the case which render it improper or unsafe, as in some cases of furious madness, the facts should be stated in the application to the court so that a provision may be inserted in the commission dispensing with the necessity of the notice.[2] A verbal statement to the alleged lunatic, that an application for the appointment of a commission is to be made at a certain time, is not sufficient notice to him.[3] In South Carolina the courts, following the English precedents, held that it was not necessary that the alleged lunatic have notice of the inquisition. But the courts of that State also adopt the English rule that the alleged lunatic has at all times the right to traverse the inquisition.[4] In Pennsylvania the same rules seem to be adopted, the commission and jury not being required to examine the party, although when practicable the jury is required to see him and if possible hear his conversation, and he is permitted to be present and have all the rights of a defendant.[5] In Kentucky the statute requires all inquisitions to be made in open court, and that the idiot or lunatic shall be brought into court for the inspection and examination of the jurors, unless it appears by affidavit that he cannot be controlled or that ill health forbids it. And it is held that when the lunatic is so brought into court and trial had, the necessity of either notice or writ is dispensed with.[6] Notice of an application for a commission *de idiota inquirendo* need not be given the alleged idiot, where notice of the time and place of the execution of the commission is given.[7] But in Morton *v.* Sims, 64 Ga., 298, it was held that a commission issued without a requisite notice and neither preceded nor followed by the appointment of a guardian *ad litem* is not aided by the presence of the imbecile and his representation by counsel, even where the counsel gives his consent to the judgment appointing the guardian, it appearing that the commission was executed on the next day after it was issued and that the judgment followed immediately. The object of the notice is that there may be due warning to make objection for legal cause to

[1] *In re* Tracy, 1 Paige (N. Y.), 580; *in re* Russell, 1 Barb. Ch. (N. Y.), 38.

[2] Hutts *v.* Hutts, 62 Ind., 214; Van Auken's Case, 2 Stock. (N. J.), 186.

[3] *In re* Blewitt, 131 N. Y., 541.

[4] Medlock *v.* Cogburn, vol. B, Rich. Eq., 477.

[5] *In re* Lincoln, 1 Brewster, 392.

[6] McAfee *v.* Commonwealth, 3 B. Mon., 305; Lackey *v.* Lackey, 8 B. Mon., 107; Nyce *v.* Hamilton, 90 Ind., 417; *in re* Demcet, 27 Hun (N. Y.), 480.

[7] Gridley *v.* St. Francis Xavier College, 137 N. Y., 327. But *cf.* Oster *v.* Meyer (Ky.), 67 S. W. R., 851.

the commission or any of the commissioners, as well as to prepare for introducing evidence on the main question. The notice must be served upon the party in person, and it is insufficient for the attorney appointed to defend the party, or a guardian *ad litem*, to accept service of it.[1]

In those States in which the jurisdiction over insane persons is committed to the probate court, the statute generally requires a notice to be served upon the order of the court in a manner similar to that provided in the case of a minor.

It is largely within the discretion of the court as to what parties other than the alleged lunatic shall have notice of the commission and be entitled to be present at its execution.[2] Such relatives and friends as favor a finding against the alleged lunatic are not competent to receive such notice.[3]

A failure to give notice of an application for a commission to one of the heirs of the lunatic is at most only an irregularity, as he has no absolute right to notice.[4] In some cases want of notice to the alleged incompetent person has been held to render the proceedings void.[5] He should be served with notice[6]

[1] Morton *v.* Sims, 64 Ga., 298; Chase *v.* Pellerin, 16 La., 63; Germon *v.* Dubois, 23 La. Ann., 26; *in re* Pettit, 2 Paige (N. Y.), 174.

[2] *In re* Nesbitt, 2 Phillips, 245.

[3] *Ex parte* Hinchman, 4 Clark (Pa.), 184.

[4] *In re* Rodgers, 9 Abb. N. C. (N. Y.), 141.

[5] McCury *v.* Hooper, 12 Ala., 823; Eslava *v.* Lepretre, 21 Ala., 514; Molton *v.* Henderson, 62 Ala., 426; Airington *v.* Airington, 32 Ark., 674; Commonwealth, *ex rel.*, *v.* Groh, 10 Pa. Co. Ct., 557; Martin *v.* Mottsinger (Ind.), 30 N. E., 523; State *v.* Billings, 55 Minn., 467, 57 N. W. Rep., 794; French *v.* State, 55 N. W. Rep., 566, 85 Wis., 400; South Penn. Oil Co. *v.* McIntire, 44 W. Va., 296, 28 S. E. Rep., 922; *in re* Dowdell, 169 Mass., 387, 47 N. E. Rep., 1033. As to *equal protection of the laws*, in Nobles *v.* State of Georgia, 168 U. S., 398, it was held that after conviction of crime the method of inquiring into insanity, at common law, addressed itself to the judicial discretion, and therefore the method is now purely a matter for legislative regulation, and a statute authorizing an inquiry not in the presence of court or judge is not a denial of due process of law. See also Porter *v.* Ritch, 70 Conn., 235, 39 L. R. A., 353, 39 Atl. Rep., 169.

Cf. State *v.* Judge of Eighth Jud. Dist., 48 La. Ann., 503; 19 So. Rep., 475, respecting inquiry into insanity after conviction; French *v.* State, 93 Wis., 325, 67 N. W. Rep., 706, respecting constitutionality of preliminary trial of question of sanity at time of trial.

Cf. contra, Kimball *v.* Fisk, 39 N. H., 110.

[6] Allis *v.* Morton, 4 Gray (Mass.), 63; Evans *v.* Johnson, 39 W. Va., 299; 23 L. R. A., 137; 19 S. E. R., 623; Oil Co. *v.* McIntire, 44 W. Va., 296; 28 S. E. R., 922; but see Swope *v.* Frazier, 18 Ky. L. R., 649; 37 S. W. R., 495; Heckman *v.* Adams, 50 Ohio St., 305; 34 N. E. R., 155; Jones *v.* Learned, 66 Pac. R., 1071 (Colo. App.); Taylor *v.* Moore, 23 Ky. L. R., 1572; 65 S. W. R., 612. And actual notice is sufficient; it is not necessary that there be process served in the name of the commonwealth, Oster *v.* Meyer (Ky.), 67 S. W. R., 851.

and be afforded opportunity to be present in person or by counsel.[1]

No advantage can be taken collaterally because of want of notice.[2] In Illinois an inquest of lunacy was held void where the record showed service of summons upon the alleged lunatic at less than the statutory time before the date of hearing and that the service was otherwise irregular.[3]

According to some decisions a statute may authorize the court in its discretion to dispense with personal service of notice upon him, without infringing his constitutional rights.[4] According to others a statute which authorizes a court for cause to dispense with notice is, to that extent at least, invalid.[5] And an adjudication made under an unconstitutional statute is void.[6] The same rules are applied to the adjudication and commitment of habitual drunkards.[7]

Another ground on which the constitutionality of statutes providing for the trial of the inquisition by a commission, when a jury trial is not demanded by the alleged lunatic, has been attacked, is that they violate the constitutional guaranty of the right to trial by jury. But it has been answered by the courts that the inquiry being a civil trial, the right to trial by jury may be waived, and is waived by the neglect or refusal of the incompetent to demand a jury trial.[8]

THE PETITION AND COMMISSION.—The commission *de lunatico inquirendo* is issued out of the court in which the care and custody of incompetent persons is vested, upon a petition made

[1] *In re* Wellman, 3 Kan. App., 100; 45 Pac. R., 726; Saules *v.* Robinson (Ind.), 60 N. E. R., 726; Stewart *v.* Taylor, 23 Ky. L. R., 577; 63 S. W. R., 783; Arnett's Com. *v.* Owens, 23 Ky. L. R., 1409; 65 S. W. R., 151. A provision for temporary confinement without a hearing is valid. *In re* Le Donne, 173 Mass., 550; 54 N. E. R., 244; Porter *v.* Ritch, 70 Conn., 235; 39 Atl. R., 169; 39 L. R. A., 353.

[2] Rodgers *v.* Walker, 6 Penn. St., 371; Willis *v.* Willis, 12 Penn. St., 159; Durcher *v.* Hill, 29 Mo., 271; Arington *v.* Short, 3 Hanks (N. C.), 71.

[3] Behrensmeyer *v.* Kreitz (Ill.), 26 N. E., 704.

[4] *In re* Walker, 57 App. Div., 1; 67 N. Y. Supp., 647; People *ex rel.* Morrell *v.* Dold, 189 N. Y., 546; *cf.* Sporza *v.* German Savgs. Bk., 192 N. Y., 8, 20; 84 N. E. R., 406.

[5] Hunt *v.* Searcy (Mo.), 67 S. W. R., 206; Stewart *v.* Taylor, 23 Ky. L. R., 517; 63 S. W. R., 783; *in re* Lambert, 134 Cal., 626; 66 Pac. R., 851; 55 L. R. A., 856; but his presence may undoubtedly be dispensed with. Oster *v.* Meyer (Ky.), 67 S. W. R., 851; Simon *v.* Craft, 182 U. S., 427; 21 Supr. Ct. R., 836.

[6] Cases cited.

[7] People *v.* St. Sav. San., 34 App. Div. (N. Y.), 363; People *v.* Creamer, 30 App. Div., 624.

[8] Sporza *v.* German Savgs. Bk., 192 N. Y., 8; 84 N. E. R., 406; People *ex rel.* Morrell *v.* Dold, 189 N. Y., 546; *cf. in re* Le Donne, 173 Mass., 550; 54 N. E. R., 244.

by a person related by blood or marriage to the alleged lunatic or interested in his estate, and must be accompanied by affidavit of the facts upon which the petition is founded.[1]

The commission cannot be issued upon the petition of a mere stranger,[2] unless some statute otherwise provides.[1] In Alabama the petition cannot be made by the wife of the alleged lunatic, but must be by her next friend.[3]

The issuing of the commission is within the discretion of the court and it will not be granted unless it be shown that it is for the well-being of the lunatic.[4] The issuing of the commission being discretionary with the court, it follows that the refusal of the court to issue it cannot be reviewed by a court of appellate jurisdiction.[5]

When the commission is to be executed the commissioners in lunacy issue their precept to the sheriff, requiring him to cause a jury of good and lawful men of his county to come before them at a certain time and a certain place, to inquire into the questions which by virtue of the commission will be properly given in their charge.[6] Where the proceedings upon the commission are commenced before a greater number of jurors than is necessary, it is irregular to continue the proceedings before a part only.[7] The commissioners have the power to subpœna witnesses and to compel their attendance.[8]

They also have the power to examine the alleged lunatic per-

[1] Nailor *v.* Nailor, 4 Dana, 339; Washer *v.* Slater, 67 App. Div., 385; 73 N. Y. Supp., 425; but, if the statute so provides, the petition may be presented by a stranger or a non-resident relative, *in re* Burke, 110 N. Y. Supp., 1004; Commonwealth *v.* Metz, 2 Dauph. Co. R., 360. See also *in re* Solomon Wolf, 195 Pa. St., 438, 46 Atl. R., 72, defining "person aggrieved" entitled to traverse an inquisition under the statute as a person related to incompetent by blood or marriage or interested in his estate. See also *in re* Wolf, 10 Kulp., 112. Upon the appointment of a guardian for a foreign incompetent, in Minnesota, who had property in the State, the administratrix of a decedent, in whose estate the incompetent had an interest, was held not entitled to notice of the appointment. And notwithstanding such notice, she was not entitled to appeal from the refusal of the Court to permit her to take part. *In re* Edgerly, 84 N. W. Rep., 653.

[2] Covinhovin's case, vol. B Saxton, c. 19; and see Rorback *v.* Van Blarcoom, 20 N. J. Eq., 461.

[3] Campbell *v.* Campbell, 39 Ala., 312.

[4] Overing's Case, 1 Blandf. Ch. (Md.), 290; Colvin's Case, 3 Md. Ch., 206; *In re* Burke, 110 N. Y. Supp., 1004; 125 App. Div., 889; Matter of Clark, 175 N. Y., 139; 65 N. E. R., 212.

[5] *In re* Colvin, 3 Md. Ch., 258. See, however, *in re* Burke, *supra*; Lawson *v.* Hilton, 69 App. Div. (N. Y.), 303; 85 Supp., 863.

[6] *In re* Wager, 6 Paige (N. Y.), 11.

[7] Tebout's Case, 9 Abb. Pr., 211.

[8] *Ex parte* Plank, 5 Clark (Pa.), 35.

sonally and to compel those having him in charge to produce him.[1] The lunatic has the right to be present at the execution of the commission, but his appearance may be dispensed with, and the proceedings will not be void because the lunatic was not present. In those States where the proceedings upon the execution of the commission are *ex parte*, the supposed lunatic not being entitled as of right to notice thereof, he has not, strictly speaking, the right to be present. But when the proceedings are in the nature of a full litigation of the question of sanity between the supposed lunatic and the petitioner, the lunatic, having a right to notice, can avail himself of such notice and be present, unless his presence be attended with danger to himself or other persons.[2] The return of the commission should be made within a reasonable time. There should be incorporated in the commission a return day, and in any event the court out of which it was issued should limit the time in which the commission shall be executed.[3]

Finding of the Inquisition.—The commission, the verdict, and return in lunacy proceedings must be consistent upon the face of the records, and therefore the verdict must be in the words of the commission or in equivalent words. The inquisition must show that the imbecility of the mind is such as to render the imbecile unfit for the government of himself and property; a return that the party is not a lunatic but that his mind is impaired by age and other causes, so that he is incapable of managing his business, is insufficient.[4]

To authorize the court to appoint a committee for the care and custody of an insane person, the jury must find distinctly that he is of unsound mind and mentally incapable of governing himself or managing his affairs.[5] The reason of the rule obviously rests on the principle that it is not every case of mental weakness or imbecility which will authorize the court to exercise the power of appointing a committee of the person and estate; but to justify the exercise of such a power the mind of the individual must be so impaired as to be reduced to a state which as a congenital incapacity would have constituted a case of idiocy.[6]

[1] *Ex parte* Childs, 1 C. E. Green (N. J.), 498.

[2] *In re* Dickie, 7 Abb. N. C. (N. Y.), 417.

[3] Lincoln's Case, 1 Brewster (Pa.), 392; *in re* Plank, 5 Clark (Pa.), 35.

[4] *In re* Lindsey, 44 N. J. Eq., 564; s. c., 15 Atl., 1.

[5] *In re* Morgan, 7 Paige (N. Y.), 236; *in re* Rodgers, 9 Abb. N. Cas. (N. Y.), 141.

[6] *In re* Morgan, 7 Paige (N. Y.), 236;

The court may in its discretion set aside the finding and order the issue of a new commission.[1] In New York the proceedings upon the inquisition not being *ex parte*, and the party, strictly speaking, not having the right to traverse the inquisition, it is held that the subject of the commission is entitled to a new trial of the writ if it appear that the finding against his sanity was induced by bias or previously formed opinion on the part of the jury.[2] The court may make a personal examination of the lunatic in order to ascertain whether the finding of the inquisition is erroneous.[3] And where there is doubt of the insanity of one declared a lunatic he should be apprised of the fact and of the chancellor's readiness to hear any communication from him or in his behalf.[4] An inquisition will not, however, be set aside for mere irregularity when the subject has been found a lunatic in proper form and there is no doubt of his insanity.[5]

Traverse of the Inquisition.—In those of the United States where proceedings upon the writ *de lunatico inquirendo* are *ex parte* and the alleged lunatic is not of right entitled to notice, a right to traverse the inquisition is accorded.[6] But in those States where notice of the time and place of holding the commission is allowed to the alleged lunatic as matter of right, a traverse is only allowed in the discretion of the court. In Christie's case, 5 Paige (N. Y.), 242, Chancellor Walworth declined to grant an application for leave to traverse the inquisition unless satisfied upon a private examination of the lunatic, or by the report of a master that such was the wish of the lunatic and that he was capable of understanding the nature and object of the application.[7] But an alleged lunatic should be allowed to traverse an inquisition when, the jury on a commission *de lunatico inquirendo* finding in favor of his incapacity, upon an examination of the proceedings there appears to be a reasonable doubt as to the

query, if this case does not state the *rule* too strongly.

[1] *In re* Lasher, 2 Barb. Ch., 97; Weaver's appeal, 116 Pa. St., 225; Matter of Lewis, 57 Misc. (N. Y.), 670; Matter of Mason, 1 Barb. (N. Y.), 436; Matter of Cooper, 5 Law. Bull., 338; Matter of Preston, 43 Misc. (N. Y.), 550.

[2] Tebout's Case, 9 Abb. Pr. (N. Y.), 211.

[3] *In re* Fitzgerald, 3 Stewart, 59.

[4] Morgan's Case, 3 Blandf. Ch. (Md.), 332.

[5] *In re* Rodgers, 9 Abb. N. C. (N. Y.), 141.

[6] Walker *v.* Russell, 10 S. Car., 82; Covenhoven's Case, Saxt. Ch. Cases (N. J.), 19.

[7] See also *ex parte* Tracy, 1 Paige (N. Y.), 580; Clapp's Case, 20 How. Pr. (N. Y.), 385; *in re* Russell, 1 Barb. Ch. (N. Y.), 38.

propriety of their finding.[1] In Indiana it is held that one being found insane by a jury and a guardian appointed, he cannot, upon his own application or that of his next friend, have inquiry into the proceedings upon the inquisition, or into the fact of his restoration to sound mind. Such inquiry can only be had upon the application of some other person.[2] A party in interest with the alleged lunatic may be allowed to traverse the inquisition. In New York under the former practice, a purchaser whose conveyance was invalidated by the inquisition was permitted to traverse it, on stipulating to be bound by the final decision therein.[3] And when such a person had joined in a traverse, and consented to be bound by its results, the other parties could abandon it without his consent.[4]

In Massachusetts and generally in those States where the care of insane persons and their property is vested in guardians appointed by probate courts, such guardians may be discharged by the courts upon the application of the ward or another, whenever it appears that the guardianship is no longer necessary for the safety and well-being of the ward or his estate. And, as in other probate proceedings, an appeal lies from the decree in any case appointing a guardian for an insane person.[5]

Upon the trial of a traverse the inquisition is *prima facie* evidence of the insanity of the subject and places upon the traverser the burden of proof.[6] Like a legal presumption the inquisition continues to operate until overpowered; and, standing as full proof till then, it necessarily remains in force until the question of sanity has been finally decided.[7]

RESTORATION TO SANITY.

Upon the recovery of a lunatic, so found by inquisition, the court upon his petition may grant *supersedeas* of the commission.[8]

The procedure to supersede an adjudication of lunacy varies

[1] De Hart *v.* Cowdit, 51 N. J. Eq., 611; 28 Atl., 607.

[2] Gillespie *v.* Thompson, 7 Ind., 353; Mebany *v.* Mebany, 59 Ind., 257.

[3] *In re* Christie, 5 Paige (N. Y.), 242.

[4] *In re* Giles, 11 Paige (N. Y.), 243; *in re* Folger, 4 Johns. Ch., 169.

[5] Pub. Sts. Mass., c. 139, s. 12, and see M'Donald *v.* Morton, 1 Mass., 543.

[6] McGinnis *v.* Commonwealth, 74 Pa. St., 245.

[7] Rogers *v.* Walker, 66 Pa. St., 371, and see also Ludwick *v.* Commonwealth, 18 Pa. St., 175; Lacky *v.* Cunningham, 56 Pa. St., 373; Hill *v.* Day, 34 N. J. Eq., 150.

[8] *In re* Rogers, I Hulst. N. J., 46; *in re* Hailes, 3 Johns. Ch. (N. Y.), 567.

in different jurisdictions and is usually defined by statute.[1] Discharge from an asylum is sometimes secured by a writ of *habeas corpus*[2] or by mandamus for a writ of discharge.[3]

In Missouri it has been said that a decree of lunacy, until terminated by a decree of restoration, cannot be impeached by proof that the lunatic has become capable of managing his own affairs.[4] But in Kansas an adjudication of restoration to reason was dispensed with where no guardian had been appointed, and she was in fact restored to reason.[5]

Insanity having been judicially ascertained, the law presumes its continuance until a restoration to sanity or lucid intervals is established. A discharge from an insane asylum because the officers adjudged the patient restored would be at least *prima facie* evidence of such restoration.[6]

But a commission in lunacy will not be superseded where the petitioner previously found insane is liable at any moment to become excited beyond control and requires constant supervision, when his property may be squandered, when, in fact, he is an insane man with lucid intervals.[7]

Where one had been duly found a lunatic and committees of his person and estate had been appointed the court declined to discharge the committee of the person upon the lunatic's petition alleging that he was so far restored to reason as to be able to govern himself, it not appearing that he had become competent to manage his estate, and no application having been made for

[1] *E.g.*, N. Y. Code Civil Pro., s. 2343, 2017. *In re* Lanier, 170 N. Y., 7, 62 N. E. Rep., 761, 68 App. Div., 320, 74 N. Y. S., 70. *In re* Blewitt, 138 N. Y., 148, 33 N. E. Rep., 820. Coot *v.* Ionia Probate Judge, 93 Mich., 304, 53 N. W., 395. *In re* Sherman, 17 R. I., 356. *In re* Lowe, 64 Hun (N. Y.), 633, 19 N. Y. Supp., 245. Storms *v.* Allegan Circuit Judge (Mich.), 57 N. W. Rep., 1074. Aldrich *v.* Superior Ct., 120 Cal., 140; 52 Pac. R., 148. *In re* Miller's Lunacy, 7 Pa. Dist. R., 269. Appeal of Thompson (Pa.), 16 Montg. Co. Law Rep., 102.

[2] Gresh's Case (Pa. Quarter Sessions), 12 Pa. Co. Ct. R., 295. *In re* Breese, 82 Iowa, 573. *In re* Thorp, 64 Vt., 398, 24 Atl. Rep., 991. Gardner *v.* Jones, 126 Cal., 614, 59 Pac. R., 126.

[3] Statham *v.* Blackford, 89 Va., 771, 17 S. E. Rep., 233.

[4] Kiehne *v.* Wessell, 53 Mo. App., 667. See Mutual Life Ins. Co. *v.* Wiswell, 56 Kan., 765, 44 Pac. Rep., 996.

See *supra*, p. 527, for effect of adjudications as evidence.

[5] Topeka Water Supply Co. *v.* Root, 56 Kan., 187, 42 Pac. R., 715. Walker *v.* Coates, 5 Kan. App., 209, 47 Pac. Rep., 158. Lower *v.* Schumacher, 61 Kan., 625, 60 Pac. R., 538. See also Clay *v.* Hammond, 199 Ill., 370, 65 N. E. R., 352, where evidence in collateral inquiry made out a *prima facie* case of restoration, notwithstanding previous adjudication and commitment.

[6] 2 Lawson's Rem. and Pr., § 848.

[7] *In re* Humboldt, 12 Phila., 424.

the discharge of the committee of the estate.[1] The right to the control of his property after an adjudication of his insanity is not based upon his competency to manage his business, be it great or small, but upon his restoration to mental health and consequent fitness to manage the ordinary affairs of life.[2]

The usual practice in the United States is to refer the petition for a *supersedeas* to a referee to take proofs as to the state of mind of the petitioner and to report the proofs and his opinion thereon.[3]

In those States where the determination of the facts of insanity is had, and the appointment of a guardian if the subject be insane is made, by a court of probate, the party in case of his restoration may take a remedy similar to that afforded by a *supersedeas*, by a petition to the judge of such probate court to have the letters of guardianship set aside and his estate returned to him.

Restoration of civil powers after an adjudication of habitual intemperance may be secured after reformation in the manner provided and regulated either by statute or local practice.[4]

COSTS IN LUNACY PROCEEDINGS.

The general rule seems to be that in proceedings to establish the insanity of a party the allowance of costs rests entirely in the discretion of the court. Where the proceedings are undertaken upon probable cause and in good faith, the costs are regarded as necessary expenses incurred for the benefit of the party and are payable out of his estate.[5] The costs are not payable out of the proceeds of the sale of a lunatic's real estate until the costs of the sale and the debts of the creditors having a prior lien are satisfied.[6] In Indiana it was held that when a proceeding to set aside a guardianship of an insane person is unsuccessful the costs should be taxed on the plaintiff and not upon the guardian or estate of the insane person.[7] The estate of the lunatic in the

[1] *In re* Burr, 17 Barb. (N. Y.), 9.

[2] *In re* Burgh, 61 How., 193.

[3] *In re* Rogers, 1 Halst. Ch. (N. J.), 46; Weaver's Appeal, 116 Pa. St., 225.

[4] The practice is illustrated by: Makepeace *v.* Bronnenberg, 146 Ind., 243; 45 N. E. R., 336; Cockrill *v.* Cockrill, 79 Fed., 143; 92 Fed., 811; 34 C. C. A., 254; *in re* Roberts's Estate, 197 Pa. St., 621; 47 Atl. R., 987.

[5] *In re* Beckwith, 3 Hun (N. Y.), 443; *in re* Root, 8 Paige (N. Y.), 625; *in re* Arnhout, 1 Paige (N. Y.), 497; *in re* White, 2 C. E. Green (N. J.), 274.

[6] Malone's App., 79 Pa. St., 481.

[7] Cochran *v.* Amsden, 104 Ind., 282.

hands of the committee is liable for the professional services of the attorney who conducted the lunacy proceedings.[1] It would seem that generally where a traverse of an inquisition has been had, which was instituted in good faith by parties interested other than the supposed lunatic himself, costs may be awarded out of the estate to both the committee and the petitioner for the traverse.

COMMITTEES AND GUARDIANS.

Upon the return of an inquisition pronouncing the party insane, the appointment of a committee or guardian is within the discretion of the court. Since such appointment is discretionary with the court, it follows that no order made for such a purpose can be the subject of an appeal.[2] A different rule, however, prevails in those States where the proceedings of lunacy are had upon a petition to a court of probate praying for the appointment of a guardian for an alleged insane person. In such States the subject of the petition may have the benefit of an appeal as in ordinary probate proceedings.[3]

The relatives of lunaties are to be preferred in the appointment of a committee.[4] The heirs and next of kin are entitled as of right to propose themselves for the office; any other person must obtain an order for the purpose, and his petition must state particularly existing objections to the appointment of the heir or next of kin.[5] The father of a lunatic having custody of his estate should be appointed his committee.[6] In New York it has been held that a stranger cannot be appointed without the consent of the next of kin, except after a reference of which they are entitled to notice.[7] The guardianship of the estate of a lunatic will not in all cases be committed to those who are presumptively entitled to it as his heirs or next of kin. These persons will be appointed only when it appears that they are the ones most likely to preserve the lunatic's estate and promote his personal welfare and happiness.[8] In the appoint-

[1] Weir *v.* Myers, 34 Pa. St., 677; Brownlee *v.* Sweitzer, 49 Ind., 221.

[2] Willis *v.* Lewis, 5 Ired. (N. C.), 14. See, however, *in re* Burke, 110 N. Y. Supp., 1004; 125 App. Div., 889; Lawson *v.* Hilton, 69 App. Div., 303; 85 N. Y. Supp., 363.

[3] M'Donald *v.* Martin, 1 Mass., 543.

[4] Richards, *ex parte*, Brev. Vol. B. (S. C.), 375; *in re* Colvin, 3 Md. Ch., 278.

[5] *In re* Livingstone, 1 John. Ch. (N. Y.), 436; *in re* Webb, 2 Phillips, 10.

[6] Coleman *v.* Commissioners, 6 B. Mon. (Ky.), 239.

[7] *In re* Lamoree, 32 Barb. (N. Y.), 122; *in re* Owens, 47 How. Pr. (N. Y.), 150.

[8] *In re* Taylor, 9 Paige (N. Y.), 611; *in re* Paige, 7 Daly (N. Y.), 155.

ment of a committee of the person the court will regard so far as possible and proper so to do, under the circumstances, the wishes and inclinations of the lunatic himself.[1]

Where a wife is found insane and the husband is a suitable person for the trust, the intimate and confidential nature of the marriage relation renders it proper that he should be preferred in the appointment of a guardian to a third person.[2] But the husband will not be allowed the custody of the person of his insane wife where it appears his friendliness toward her is very questionable, and that his motives for seeking to obtain letters are actuated by self-interest.[3]

A committee appointed by a court of equity in the exercise of ordinary equity powers is a mere officer of the court. He is responsible to the court and acts under its orders and discretion, and is removable by the court like an ordinary receiver.[4] Where the guardianship of insane persons is committed by statute to the probate courts the duties and responsibilities of the guardian are the same as those of the guardians of minors.[5]

The committee of the lunatic's estate is generally required to give security for the proper performance of his duties and judicious management of the estate. The bonds are properly made payable to the people of the State.[6]

In the United States the courts of chancery ordinarily allow to the committees of insane persons such reasonable compensation as would be allowed to guardians and trustees in similar circumstances.[7] This same rule obtains in States where the custody of the person and estate of insane persons is vested in guardians appointed by the probate courts.[8]

MANAGEMENT OF ESTATES.

The estate of the insane person is to be so managed as best to promote the personal interest and to provide for the care and comfort of the lunatic.

A committee of a lunatic is bound to use such diligence and

[1] *In re* Leacocke, Lloyd and Goold (Eng. Ch.), 498.
[2] Drew's Appeal, 57 N. H., 181.
[3] Feegan's Estate, 1 Myrick Prob. Rep. (Cal.), 10.
[4] Bolling *v.* Turner, 6 Rand. (Va.), 584.
[5] Auilerson *v.* Auilerson, 42 Vt., 350.
[6] *In re* White, 1 Barb. Ch., 43.
[7] *In re* Livingston, 9 Paige, 440; *in re* Roberts, 3 Johns. Ch., 43.
[8] May *v.* May, 109 Mass., 252.

prudence in the care and management of the lunatic's estate as, in general, prudent men of intelligence and discretion in such matters employ in their own like affairs; the preservation of the fund and the procurement of a just and proper income therefrom are primary objects of the creation of the trust and are to be primarily regarded.[1]

In May *v.* May, 109 Mass., 256, the court said: "The guardian is appointed for the welfare, comfort, and security of the ward, and not for the increase of the estate in his hands by accumulation from the income in order to enlarge the wealth of remote or collateral relations who may ultimately succeed to the inheritance. It is no part of his duty to diminish the reasonable comfort of his ward, or to prevent him from enjoying such luxuries or indulging such tastes as would be allowable and proper in the care of a man similarly situated in other respects, but in full possession of his faculties. The preservation of the estate to the advantage and interest of possible heirs is of secondary and subordinate consideration. The lunatic's property should be liberally applied to secure him every comfort his situation will admit of, and the amount is not necessary to be limited to the annual income of the estate."

In some States it is held that the guardian or committee of an insane person cannot without an order of the court expend an amount exceeding the annual income of the estate for and on account of the ward.[2] But the court will at all times direct to be done whatever appears to the advantage of the lunatic without regard to the interests of the next of kin.[3] In a California case it is held that, it being the husband's duty to provide for the support of his insane wife, notwithstanding she may have sufficient estate of her own, her separate estate is not to be applied to her support until the husband's estate is exhausted.[4]

After ample provision is made for the support of the insane person, the income of his property may be applied for the benefit of those for whom he is under obligation to provide.[5] The court will in all cases act for the lunatic, in the disposition of his property, as it supposes he would act in like cases if sane.[6]

[1] Matter of Hathaway, 80 Hun, 186.
[2] Patton *v.* Thompson, 2 Jones Eq. (N. C.), 411; Kennedy *v.* Johnson, 65 Pa. St., 451.
[3] *In re* Colah, 3 Daly (N. Y.), 529.
[4] Myer's Estate, 1 Myrick Prob. Rep. (Cal.), 178.
[5] Hambleton's Appeal, 102 Pa. St., 5.
[6] *In re* Willoughby, 11 Paige (N. Y.), 257.

The personal property of an insane person must first be exhausted before the real estate can be sold for his support and maintenance.[1] But if the statute provide that a sale be made by order of the court upon the application of a guardian, trustee, or committee, the court has no power to make such order upon its own motion or upon the application of any other party.[2]

The real estate of a lunatic may be sold to pay debts, but not where the effect of the sale would be to reduce the lunatic to a condition of want.[3] An excess of a lunatic's property over an amount sufficient for the reasonable support of his wife and children may be sold with the court's sanction, and the assets applied by the guardian in payment of his debts.[4] Such excess, if insufficient to pay all his debts, must be applied ratably among the creditors, and the guardian has no right to exhaust all of such amount by paying certain creditors in full, when he knows of other debts due from his ward on which he pays nothing.[5]

The committee or guardian has no power to convey or lease the lands of the ward without an order of the court.[6] Ordinarily all contracts affecting the estate of a lunatic are to be executed under the direction of the court. All such contracts must appear to be for the interest of the lunatic.[7]

The court may authorize the committee to apply the lunatic's personal property for the improvement of unproductive real estate as by the erection of buildings thereon.[8] The court cannot direct the lease of lands beyond a time when the lunatic shall have been restored to reason.[9]

A committee or guardian cannot relinquish an insane wife's right of dower in the estate of her husband;[10] or make an election for her of her dower or of a provision in her husband's will in lieu thereof.[11] Nor can a committee maintain ejectment against the lunatic's wife to eject her and her children from the home

[1] *In re* Taylor, 9 Paige (N. Y.), 611; *in re* Pettit, 2 Paige, 596; *in re* Hoag, 7 Paige (N. Y.), 312.

[2] Hamilton *v.* Traher, 27 Atl., 229 (Md.).

[3] Adams *v.* Thomas, 81 N. C., 296; *in re* Sartam, 14 Eq. (N. C.), 231.

[4] McLean *v.* Breese, 109 (N. C.), 564.

[5] Frost *v.* Redford, 54 Mo. App., 345.

[6] De Treville *v.* Ellis, Bailey Eq. (S. C.), 35; 21 Am. Dec., 519; McLean *v.* Breese, 109 (N. C.), 564.

[7] *In re* Salisbury, 3 Johns. Ch. (N. Y.), 347; *in re* Colvin, 4 Md. Ch., 278.

[8] *In re* Livingston, 9 Paige (N. Y.), 440.

[9] De Treville *v.* Ellis, 21 Am. Dec., 519; Bailey Eq. (S. C.), 35.

[10] Eslava *v.* Lepretre, 2 Ala., 504.

[11] Kennedy *v.* Johnson, 65 Pa. St., 451.

provided for them by him while sane.[1] The cases cited in the note illustrate the powers of guardians and others in actions in behalf of and against the incompetent.[2]

Death of Incompetent Under Guardianship.—On the death of the incompetent the guardianship of property as well as of person ceases, but the guardian is still trustee of the property in his custody, liable to account therefor to the persons who succeed to the rights of his ward,[3] though his rights and power over the property as against such persons terminate upon the death.[4]

Bankruptcy of Insane Persons.—Under the present national bankrupt law (1898) it has been held that a lunatic cannot, through his committee or in his own behalf, voluntarily petition in bankruptcy.[5]

CARE AND RESTRAINT OF PERSONS OF UNSOUND MIND.

The care and custody of the person of a lunatic being committed by statute to the court, it is its duty to see that he is maintained as comfortably as his unfortunate situation will admit and his pecuniary resources will allow, and that everything is done that can be, by care, skill, and medical treatment, to promote his general health and his restoration to reason.[6]

Most of the States have provided by statute for the proper

[1] Shaffer *v.* List, 114 Pa. St., 486.

[2] Divorce: Sims *v.* Sims, 28 S. E. R., 407; 121 N. C., 297; Iago *v.* Iago, 168 Ill., 339; 48 N. E. R., 30. Lunatic and guardian as parties: Scott *v.* Bassett, 194 Ill., 602; 62 N. E. R., 94; Mullen *v.* Dunn, 134 Cal., 247; 66 Pac. R., 209. Citizenship of ward, not guardian, determines jurisdiction: Stout *v.* Rigney, 107 Fed., 545; 46 C. C. A., 459. No adverse possession against lunatic: Clairty *v.* Sheridan, 91 Iowa, 304; 59 N. W. R., 52; Clarke *v.* Irwin (Neb.), 88 N. W. R., 783. For matters of practice the statutes of the several States must be consulted.

[3] Downing *v.* Whitney, 46 App. Div., 307; 61 N. Y. Supp., 540.

[4] Forbell *v.* Denton, 53 App. Div., 402; 65 N. Y. Supp., 1120.

For appointment of administrator of deceased lunatic see *in re* Harper, 68 L. J. Prob. (Eng.), 48; 80 L. T. (N. S.), 294. And where only next of kin is also lunatic see *in re* Druce, 68 L. J. Prob. (Eng.), 120; 81 L. T. (N. S.), 458.

[5] Matter of Eisenberg, U. S. Dist. Ct. S. D. of N. Y., 8 Am. Bk'cy. Rep., 551. Nor will an involuntary petition lie against an adjudicated lunatic under guardianship. U. S. Dist. Ct. Iowa, *In re* Funk, 101 Fed. Rep., 244. Under former bankrupt law the petition would lie, if the act of bankruptcy was committed before insanity and appointment of guardian. *In re* Pratt, 6 N. B. R., 276, Fed. Cas. 11,371. *In re* Weitzel, 14 N. B. R., 466, Fed. Cas. 17,365. But a person of unsound mind could not be declared bankrupt in an involuntary proceeding. *In re* Marvin, 1 Dill., 178, 16 Fed. Cas. 927.

[6] Parsee Merchant's Case, 11 Abb. N. S. (N. Y.), 209.

care and restraint of such persons in public institutions supported and maintained at the expense of the State. As the jurisdiction of the State over persons of unsound mind rests in part upon its duty to protect the community from acts of those who are not under the guidance of reason, the law admits the duty of the State to provide proper means for the restraint of such persons, where their estate is not sufficient to provide such care and restraint, or where there are no persons of sufficient means upon whom such lunatics are a lawful charge. The father of an insane son, whose estate is barely sufficient for the comfortable support of his family, cannot be compelled to pay the cost of the maintenance of such insane son in an insane asylum, when such son is committed as an indigent insane person by a court having jurisdiction under a statute providing therefor.[1]

We have seen that the support and maintenance of insane persons is a primary charge upon their estate, and this is so even if such persons are confined within institutions maintained at State expense.

Such insane persons as are so violent that their remaining at liberty would be dangerous to themselves and the community may be confined by any person without warrant, and with no other authority than the inherent necessity of the case.[2]

It is as competent for a magistrate to order into custody an insane person who is in the act of committing a breach of the peace as to order the arrest of a sane person under like circumstances, for, although the insane person may be incapable of crime, he may lawfully be prevented from doing harm.[3] But such confinement can only continue during the time necessary to institute proceedings to inquire into the person's condition and provide for his legal custody.[4]

To justify the arrest and restraint of an insane person it is not necessary that he should at the time of his arrest be actually engaged in the commission of a crime. Any insane person may be restrained of his liberty by his family or others to prevent injury to himself or others.[5]

[1] Trustees of Poor *v.* Jacobs, 6 Houst. (Del.), 330.

[2] Emmerich *v.* Thorley, 35 App. Div., 452; 54 N. Y. Supp., 79.

[3] Colby *v.* Jackson, 12 N. H., 526; Davis *v.* Merrill, 47 N. H., 208; Van Deusen *v.* Newcomer, 40 Mich., 90; Williams *v.* Williams, 2 Hun (N. Y.), 111.

[4] Lott *v.* Sweet, 33 Mich., 308.

[5] *In re* Oakes, 8 Law Rep. (Mass.), 122.

COMMITMENT AND CONFINEMENT OF THE INSANE.—Under a constitutional government no person can be deprived of life, liberty, or property without "due process of law," and therefore no person can be lawfully declared insane and his personal liberty permanently restrained without formal proceedings and an opportunity afforded him to appear personally and with witnesses, to refute the allegations of the persons seeking his confinement. Various forms of procedure are prescribed by statute for the determination of the question of insanity and the consequent commitment of the alleged insane person to an institution. In many States a trial by jury is required in every case, and all the facts are presented and passed upon, and a verdict rendered as in all other cases where the liberty of the person is at stake. The trial is in open court, attended with all the form of a criminal proceeding. The theory is that the charge of insanity is inimical to the interests of the person sought to be confined, and that he should therefore be given the opportunity of defending the charge and that the truth thereof should be determined by a jury of "his peers." Such a system of commitment exists in the State of Illinois.

It is not satisfactory; justice to the alleged lunatic is not thereby accorded. Under this system sane persons have been declared insane, and persons clearly and undoubtedly of unsound mind have been "acquitted."

The empanelling of a jury and the complicated form of procedure attendant thereto have caused delays, which often injure the health of patients requiring immediate treatment. The publicity and commotion of such a trial injuriously affect the disordered minds of alleged lunatics and disgust and grieve their friends and relatives.

Lunacy is not a crime, but a disease. A jury of laymen is not requisite justly to determine the question of whether a person is suffering from this infirmity. It is a question for medical experts, who from their training and experience are qualified to pass upon it. Hence in most of the States the order of commitment is issued only after an examination of the alleged lunatic by medical experts. The experts are required to certify the results of such examination to the judge having jurisdiction, and such judge, if satisfied from the certificate and such other proof as may be presented that the alleged insane person should be con-

fined in an institution, shall make an order to that effect. In some States it is provided that the question of insanity shall in each case be determined by a commission, composed of a medical expert and one or two laymen, associated with the judge to hear the proofs and examine the person alleged to be insane. Upon their decision the order is issued.

Other methods of commitment are provided in the several States, more or less complex in form of proceeding and more or less adapted to the welfare and protection of alleged lunatics.

It is evident that the right to confine a person because of alleged insanity is based upon the benefit to be derived by such person and the necessity of protecting the community from his acts. No lunatic should be deprived of his liberty unless restraint is necessary or beneficial.[1] The new theory of "care and treatment" has supplemented and become associated with the common law right of detention, so that now the confinement of a lunatic in an institution is an incident of his proper medical and scientific care and treatment. While the safety and welfare of the community are subserved by taking therefrom a person suffering mentally in such a manner as to be dangerous to those about him, yet the chief end is the improvement of his unfortunate condition and the alleviating of his physical sufferings.

The commitment should be hedged about by safeguards; the law should be so framed and construed as to reduce to a minimum the likelihood of the improper restraint of those not in need thereof. But the theory that a person afflicted with mental disease should be tried and convicted therefor, that the proceeding to determine the question of his mental condition should be in the form of a criminal proceeding, is antiquated, and in view of the advance of medico-legal science with reference to lunacy should have no place in our statute law.

The alleged lunatic should in every case be examined by well qualified and competent medical experts. The judge whose duty it is to pass upon the question, if in doubt as to the motives actuating the petitioner and dissatisfied with the result of the examination by the experts, should be empowered to examine other witnesses and secure further expert testimony. A notice of the time and place set for the hearing should be given not only to the alleged insane person, but to other persons who, because of

[1] Com. *ex rel. v.* Kirkbride, 2 Brewster (Pa.), 586.

kinship or friendship, are interested in his welfare. Opportunity should be given for the persons so served to refute the allegations of the petitioner and produce witnesses in aid thereof. If issue be joined, the trial should be had before a commission of not more than three, one or more of whom should be expert in the treatment of mental diseases. The determination of the question of insanity should be based upon testimony of a scientific character. The medical experts should be fit and responsible, they should bring to bear upon the case at hand the best of their professional knowledge. They should carefully examine the person alleged to be insane, and in forming their opinion should apply all the best accredited and most recent tests.

Upon the medical profession should properly be placed the responsibility of the proper care and treatment of the insane. To them, more than to all others, should we look for a proper determination of questions of insanity. While it will probably be admitted that there are in this profession men who lack professional integrity, yet the fact that there is scarcely a case reported in this country where a physician has been accused and convicted of falsely certifying to a person's insanity would lead us to believe that they have with fidelity and honor performed the duties imposed upon them by the statutes of the different States.

Liability of Medical Examiner for False Certificate.—In most of the States the executing of a false certificate by a medical examiner is a misdemeanor. If a person maliciously and without any reasonable or probable cause has signed a certificate that a person was insane, in a state requiring confinement, and in consequence thereof a party has been detained in custody as a lunatic, such person is liable for damages caused; and such a certificate may be considered as libel, in which case an indictment would lie against the person who signed it.[1]

The first duty of a medical examiner professionally called to testify to the mental condition of a person alleged to be insane is carefully and strictly to follow the various requirements of the statute or the rules and regulations prescribed by competent authorities.

If the examiner is a physician of good repute, if the examination is made and the certificate executed in good faith, if he

[1] King *v.* Harvey and Chapman, 2 Barn. and Cress., 257.

possesses the requisite knowledge and skill to enable him to judge of the mental condition of the patient under examination, and the examination be made with the usual professional care and attention, such a certificate meets every requirement of the law; and if error is committed therein, and if unfortunately, by reason thereof, a person of sound mind is committed to an asylum for the insane, the medical examiners will be relieved of responsibility and liability for unjust restraint of liberty.[1]

A medical examiner is not responsible for an honest mistake of judgment, and particularly in reference to that judgment which is the conclusion of his examination of a person supposed to be insane.

A physician or surgeon is under obligation to possess, and it is his duty in the treatment of a case to employ, such reasonable skill and diligence as is ordinarily exercised in his profession.[2]

A medical expert before signing the certificate of insanity should take due care and make due inquiries; if he does not he is liable in damages for the consequences.

In Hall *v.* Semple, 3 Fost. and Fin., 337, Crompton, Justice, says: "The true grounds of plaintiff's complaint is the negligence of the defendant and the want of due care in the discharge of the duty thrown upon him, and I think that if a person assumes the duty of a medical man under the statutes and signs a certificate of insanity which is untrue, without making the proper examination and inquiries, which the circumstances of the case would require from a medical man using proper skill in such a matter, if he states that which is untrue and damage ensues to the party thereby, he is liable in an action."

It is the physicians' duty to make the examination with ordinary care. This duty must be measured by the trust which the statute reposes in them, and by the consequences flowing from its improper performance. They assume the duty by accepting the trust. They are not judicial officers, and as such therefore free from the charge of a lack of due and ordinary care and prudence. They are not clothed with judicial immunity and are chargeable with that negligence which attaches to a professional

[1] Penn. Lunacy Laws, p. 191 (Barlow).

[2] McCandlers *v.* MeWha, 22 Penn., 261; Holtzman *v.* Hoy, 19 Ill. App., 459; Long *v.* Morrison, 14 Ind., 595; Jones *v.* Angell, 95 Ind., 376; Carpenter *v.* Blake, 75 N. Y., 12; Barton *v.* Goran, 42 Hun (N. Y.), 655.

expert who does not use the care and skill which his profession, *per se*, implies that he will bring to his professional work.[1]

Liability for Illegal Detention.—The inherent jurisdiction of the State over persons of unsound mind rests in part upon its duty to protect the community from the acts of those who are not under the guidance of reason, and it therefore follows that if any person is so insane that his remaining at liberty would be dangerous to himself or the community, any other person may, without warrant or other cause than the inherent necessity of the case, confine such dangerous insane person, but only during so long a time as may be necessary to institute and carry to a determination proper proceedings to inquire into the party's condition and provide for his legal custody. And it is not necessary, in order to justify the arrest and restraint of the insane person, that he should at the time of arrest be actually engaged in the commission of violence; for any insane person may be restrained of his liberty, by his family or others, to such an extent and for such a length of time as may be necessary to prevent injury or damage to persons or property or to the lunatic.[2]

Except in such cases of violent and dangerous insanity, any person who assumes illegally to arrest, detain, or confine an insane person does so at his peril, and he will become liable for his act as if the person arrested, detained, or confined was sane. Where his confinement was without just cause a person can recover damages in an action for false imprisonment, from all those who united to procure his commitment, including those who actually kept him in confinement.[3] But where he was detained by the authorities of an asylum, having been properly received and without collusion or fraud, a mistake in judgment as to his insanity would not subject the authorities to liability; for the evidence must show either malice or gross negligence before there can be recovery for false imprisonment, or that they detained him after they knew he was not a proper subject for confinement.[4] And mere improvement so as to make it proper to deliver the incompetent to the custody of friends does not give rise to such liability; the improvement must first be such as to make it the duty of the custodian to release him without the company of friends.[4]

[1] Ayres *v.* Russel, 50 Hun (N. Y.), 282.

[2] Buswell on "Insanity," s. 23.

[3] Bacon *v.* Bacon, 76 Miss., 458; 24 So. Rep., 968. See *supra*, p. 599.

[4] Hindman *v.* Hutchinson, 30 Pittsb. Leg. J. (N. S.), 422.

An adjudication of insanity made under a statute at the instance of a person who under the statute is not empowered to present the petition is no justification in a suit for false imprisonment, by the person so adjudged.[1]

A person harmlessly insane cannot be arrested without a warrant, even though the purpose is to detain him until he can be carried before a proper tribunal and procure warrant of commitment to an insane asylum. The statutes providing for the detention and confinement of an insane person must be strictly followed. Any deviation therefrom is an injury to the person detained and he may recover from all parties involved in such arrest, detention, or confinement for all damages occasioned thereby.[2] The mere fact that a person is insane does not warrant his summary arrest and confinement. The law provides in what way and by what proceedings the liberty of the alleged insane person shall be restrained. There can be no valid excuse for a failure to comply with all the legal requirements. If persons interested in securing the detention and confinement of insane persons would be relieved from liability therefor, they must see to it that the letter of the law is strictly obeyed.

Writ of Habeas Corpus.—In the statutes of most of the States the right to a writ of habeas corpus is accorded to all persons detained as insane in or out of an institution for the custody, care, and treatment of insane persons. In such cases the statute generally provides that the question of sanity shall be tried, and although no irregularities may have occurred in securing his confinement, and at the time of the commitment the person was insane, if at the time of the issuance of the writ he is restored to reason he must be discharged from custody.

To detain a person after his restoration to sanity would be like detaining a prisoner after he had served out the period of his sentence. However legal and proper the confinement may have been at the beginning, and while the patient was insane, to restore the patient to his liberty and to society when his sanity is established is an appropriate office of the writ of habeas corpus.

Judge Potter, in Matter of Dixon, 11 Abb. N. C. (N. Y.), 118, so held regardless of the fact that the New York statute pro-

[1] Washer *v.* Slater, 67 App. Div., 385; 73 N. Y. Supp., 425.

[2] Look *v.* Choate, 108 Mass., 116.

vides no such remedy for persons confined in asylums who have been restored to sanity. If a person is detained or confined as a lunatic without authority of law, he may be brought into court upon a writ of habeas corpus and the legality of his detention be determined.

On an application for the writ, it should be made to appear that the applicant was acting under due authority from the alleged lunatic. In most of the States the statutes provide that provision shall be made for the unrestricted communication of inmates of institutions with persons of authority or friends or relatives named by such inmates, and that every means shall be afforded for carrying on such communication. Such letters are required to be mailed without examination by the authorities of the institution. Commissions are established in nearly all the States who have a visitorial power over all institutions for the custody and treatment of the insane. The duty is placed upon them to investigate the conduct of all such institutions, and if, in their judgment, persons are illegally detained therein, they are required to secure their discharge.

Care and Custody of the Indigent Insane.—For the provisions which have been made in the several States for the care and cure of the indigent insane, examination must be made of the statutes of these States, as synopsized below.

Liability of Insane Asylums for Torts of Employees.—In many States, as will be observed from the statutes digested below, the hospitals for the insane or their trustees are bodies corporate. In other States, the asylums have no independent corporate existence, but are merely State institutions. The question has arisen to what extent is the asylum corporation or the State liable for the wrongful acts of its agents.

The general rule is that when the State acts in its public, governmental capacity, it is not liable for the wrongful or negligent execution of such powers by its agents. Such rule has generally been held applicable to insane asylums. They are "purely eleemosynary institutions created by the State and maintained at its expense for the beneficent purpose of caring for such of its citizens as may by judgment of a court of competent jurisdiction be declared of unsound mind, and, by reason thereof, disqualified for the duties of citizenship and of caring for themselves. Such institutions are mere instrumentalities of the State

government brought into being to aid in the performance of government duty, hence the rule of *respondeat superior* does not apply to them." They cannot therefore be made to respond in damages for a personal injury inflicted upon others by their servants, or by lunaties in their charge, though such injuries result from negligenee or maliee.[1] It would seem that the same rule applies even when the patient is a paying one.[2]

In the case of private charities or asylums the decisions are hopelessly at variance.[3]

Similarly, though the agents themselves who act negligently or commit other wrongs are probably liable therefor, their superiors, as the general superintendent, are not liable for the acts of subordinates.[4]

THE STATUTES OF ALL THE STATES DIGESTED, RELATING TO THE CARE AND CUSTODY OF INCOMPETENT PERSONS AND THEIR ESTATES, INCLUDING THE ADJUDICATION OF LUNACY, AND RESTRAINT AND CONFINEMENT OF THE INSANE, AND TO THE SUBSTANTIVE LAW OF INSANITY.

[First edition compiled by Frank B. Gilbert, Esq.; compiled and revised for the second edition by Alfred L. Becker, of the Buffalo, N. Y., Bar.]

Alabama.

[The referenees are to the Civil and Criminal Codes of Alabama, 1907.]

Civil Rights.—Idiots and insane persons are disqualified from voting or holding office.[5]

The sale of liquor to an insane person without the consent of his guardian is void.[6]

[1] Leavell *v.* Western Ky. Asyl. for the Ins., 28 Ky. L. R., 1129; 91 S. W. R., 671; 4 L. R. A. (N. S.), 269; White *v.* Ala. Ins. Hosp., 138 Ala., 479; 35 So., 454; Benton *v.* Boston City Hosp., 140 Mass., 13; 1 N. E., 836; City of Richmond *v.* Long's Admrs., 17 Grat. (Va.), 375; Sherbourne *v.* Yuba Co., 21 Cal., 113; Murtaugh *v.* City, 44 Mo., 479; Downes *v.* Harper Hospital, 101 Mich., 555; 60 N. W. R., 42; Corbett *v.* St. Vincent's Industrial School, 177 N. Y., 16; 68 N. E. R., 997.

[2] Powers *v.* Mass. Hom. Hosp., 109 Fed., 294; 47 C. C. A., 122; 65 L. R. A., 372 (with full review of authorities); *contra* Glavin *v.* R. I. Hosp., 12 R. I., 411.

[3] See Justice Gaynor's able opinion in Kellogg *v.* Church Char. F., 128 App. Div. (N. Y.), 214; 112 Supp., 566.

[4] Clough *v.* Worsham, 32 Tex. Civ. App., 187; 74 S. W. R., 350; *cf.* Story on Agency, s. 319-320; Van Deusen *v.* Newcomer, 40 Mich., 90.

[5] Const. Art. viii., s. 3; Polit. Code, s. 1,467, 1,560.

[6] Civil Code, s. 5,764.

CARE AND CUSTODY.—Courts of probate have, in the cases defined by law, original jurisdiction of the appointment and removal of guardians for minors and persons of unsound mind residing in the county, having an estate real or personal, and of such persons without the State, having property within the county requiring the care of a guardian.[1]

Such guardian is not to be appointed until an inquisition has been had and taken in the case of a resident.[2]

INQUISITION, PROCEEDING.—Upon the petition of any of the relatives or friends of any person alleged to be of unsound mind setting forth the facts and name, sex, age, and residence of such person, accompanied by an affidavit that the petitioner believes the facts therein stated to be true, the court of probate of the county in which such person alleged to be of unsound mind resides must appoint a day not more than ten days from the presentment of such petition for a hearing thereon.[3]

The judge must issue a writ directed to the sheriff commanding him to summon twelve disinterested persons and issue subpœnas for witnesses returnable at the time of trial. He must also direct the sheriff to take the person alleged to be of unsound mind, and, if consistent with health or safety, have him present at the place of trial.[4]

The jury must be impanelled and sworn. If any of the jurors from any cause do not serve, their places must be supplied from the bystanders.[5]

If the jury find the facts alleged in the petition to be true, and that such person is of unsound mind, the court must cause the petition and all the proceedings thereon, to be recorded and appoint a suitable guardian of such person.[6]

If the person alleged to be of unsound mind is a resident of the county and at the time of the application confined in a hospital or asylum within or without the State, the inquisition may be had or taken without notice to him.[7]

NON-RESIDENT PERSONS OF UNSOUND MIND.—The court of probate may appoint a guardian for a person of unsound mind, having property within the State, if such person has been declared insane by a court having jurisdiction in the State of his residence.[8]

[1] Civil Code, s. 4,345.
[2] *Ibid.*, s. 4,346.
[3] *Ibid.*, s. 4,347.
[4] *Ibid.*, s. 4,348.
[5] *Ibid.*, s. 4,349.
[6] *Ibid.*, s. 4,350.
[7] *Ibid.*, s. 4,351.
[8] *Ibid.*, s. 4,357.

The application must be in writing, verified; must state the name, sex, age, and residence of such person, the court by which he was declared of unsound mind, and describe the property requiring the care of a guardian. A hearing must be given upon notice for three successive weeks by publication.[1]

WHO MAY BE APPOINTED GUARDIAN.—The court must prefer in the appointment of a guardian the person who is of nearest relationship and will in the judgment of the court best manage the estate of the ward.[2]

The general guardian of the county must be appointed guardian of a person of unsound mind if no other suitable person applies for appointment and qualifies; and if there be no general guardian, the sheriff must be appointed.[3]

THE BOND OF GUARDIAN.—The guardian other than the general guardian for the county or the sheriff, must enter into a bond with sufficient sureties payable to the judge of probate in a penalty to be prescribed by the judge, with condition for the faithful performance of all his duties.[4]

Land of the ward cannot be sold until guardian has given a bond for double the supposed or estimated value of such lands, payable to the judge of probate, and with condition that he will faithfully account for the proceeds of such sale.[5]

REVOCATION OF GUARDIANSHIP.—The insane person himself, or by next friend, may apply in writing to the court of probate for a revocation of the proceedings against him and of the letters of guardianship, the application to be accompanied by the certificate in writing of two physicians or of two other competent persons, stating that after examination of such person they believe him to be of sound mind.[6]

The court must appoint a day for the hearing thereof, not more than ten days thereafter, and the guardian and the person at whose instance the inquisition was had and taken must be cited to appear and show cause.

If the guardian or such person appear and in writing deny the allegations of the application, the court must appoint a day for the trial of such contest, cause a jury to be summoned for the trial thereof, and the like proceedings must be had as upon the original inquisition.

[1] Civil Code, s. 4,358.
[2] *Ibid.*, s. 4,359.
[3] *Ibid.*, s. 4,360.
[4] *Ibid.*, s. 4,361.
[5] *Ibid.*, s. 4,362.
[6] *Ibid.*, s. 4,352.

If there be no contest a decree must be entered, revoking the proceedings of the inquisition and the guardianship.[1]

If at any time after his appointment the guardian becomes satisfied that the ward has been restored to sanity and is capable of managing his estate, and the judge of probate is of opinion from the proofs and the facts stated that such representation is correct, he must make an order that the guardian be discharged and that the estate of the ward be restored.[2]

The Meaning of Term Persons of Unsound Mind.—The term "persons of unsound mind" includes idiots, lunatics, or the insane.[3]

Power and Duty of Guardians.—Within three months after his appointment the guardian must make an inventory of all the estate of his ward and return it upon oath to the court, and it must be filed and recorded.[4]

The guardian must manage the estate of his ward frugally and improve it to the best of his skill and ability.[5]

The guardian may publicly or privately lease the land of the ward for a term not exceeding one year and make a report thereof to the court of probate.[6]

The court of probate may authorize the guardian to lease the lands of the ward for a term not exceeding ten years, reserving rent payable annually; such lease being subject to revocation or disaffirmance by the ward, upon restoration to sanity.[7]

The guardian must keep in good repair and condition the real estate of the ward, and he can make all such improvements and repairs thereon as are necessary and proper for that purpose; but such improvements or repairs cannot be made from the principal of the funds of the ward without an order of the court of probate.[8]

The court of probate may authorize a guardian to compromise any claim or debt due to the ward.[9]

The court may authorize the guardian to take real estate in compromise of the debt or claim.[10]

The court may authorize the guardian to sell debts or other choses in action of the ward which are of doubtful collection or

[1] Civil Code, s. 4,353–4,355.
[2] *Ibid.*, s. 4,356.
[3] *Ibid.*, s. 4,361.
[4] *Ibid.*, s. 4,375.
[5] *Ibid.*, s. 4,376.
[6] *Ibid.*, s. 4,379.
[7] *Ibid.*, s. 4,380.
[8] *Ibid.*, s. 4,386.
[9] *Ibid.*, s. 4,391, 4,393.
[10] *Ibid.*, s. 4,394.

recovery. This must be done upon the order of such court, granted upon the application in writing of the guardian verified by affidavit, but a report of the sale must be made to and confirmed by the court.[1]

The court may authorize the guardian to sell any property, real or personal, when necessary for the payment of debts of such insane person incurred for the maintenance of such person or for the maintenance of his family.[2]

If the sale is of personal property, notice thereof must be given by advertisement for twenty days in a newspaper published in the county; and if of lands, such notice must be for thirty days by advertisement for four consecutive weeks in a newspaper published in the county. A report of such sale must be made to and confirmed by the court. The title of the ward is not divested until the purchase money is fully paid.[3]

The property of the ward may be sold for good cause shown for the purpose of reinvestment. The court of probate must direct how the sale shall be made, and such sale its no completed until confirmed by the court and until all the purchase money is paid.[4]

Guardians may invest the money of their wards in real estate, and if acting in good faith shall not be individually responsible for a depreciation in the value of the land purchased with the funds of the ward, if such depreciation results from causes which cannot be prevented by the guardian.[5]

Real estate purchased by the guardian with the funds of the ward must be conveyed to the ward, but managed and controlled by the guardian for the benefit of the ward.[6]

The guardian is liable to the ward for any loss sustained by the failure or defect of title of the land purchased.[7]

The court of probate, on the application of the guardian, must direct what portion of the income or of the principal of the estate of the insane person may be appropriated to the support of the family.[8]

Settlement of Guardian.—The court of probate has jurisdiction of the settlement, partial or final, of the accounts of the guardian.[9]

[1] Civil Code, s. 4,398–4,402.
[2] *Ibid.*, s. 4,407.
[3] *Ibid.*, s. 4,408.
[4] *Ibid.*, s. 4,411–4,414.
[5] *Ibid.*, s. 4,395.
[6] *Ibid.*, s. 4,396.
[7] *Ibid.*, s. 4,397.
[8] *Ibid.*, s. 4,407.
[9] *Ibid.*, s. 4,428.

The guardian must at least once in three years file in the court an account of his guardianship accompanied with the vouchers verified by affidavit. The court must appoint a day for the settlement, of which notice must be given for three successive weeks in the manner directed by the court. On the day of settlement the court must proceed to examine the vouchers and audit and state the account. If any voucher or item be rejected, all costs accruing on the contest or examination thereof must be taxed against the guardian personally. Upon the final settlement, the partial settlement must be presumed to be correct.[1]

On the death, resignation, or removal of the guardian, or on the restoration to sanity of the ward or on his death, the final settlement of the guardianship must be made. Upon such settlement the guardian must file in the court of probate a full account of the guardianship, accompanied by the vouchers and verified by affidavit. The court must appoint a day for the settlement with ten days' notice to the ward if restored to sanity, or to his personal representatives, if dead.

On the day appointed, the court must proceed to examine the vouchers and audit and state the account. If any voucher or item be rejected, all costs accruing on the contest or examination thereof must be taxed against the guardian. The court must thereupon render a decree declaring the amount due the ward, which must be entered and recorded and the account and vouchers must also be recorded.[2]

Compensation of Guardian.—The guardian is entitled to a commission of two and one-half per cent. on his disbursements, and two and one-half per cent. on his receipts, and on final settlement an allowance must be made for all actual expenses necessarily incurred by him.[3]

Upon the final settlement, the guardian, if he has not been guilty of fraud or gross negligence, must be allowed a reasonable commission, not exceeding two and one-half per cent., on the value of all personal property surrendered to the ward or to his representatives. But if the value of such personal property or of such moneys exceed twenty thousand dollars, the commission on the excess must not be more than one per cent.[4]

[1] Civil Code, s. 4,429–4,433.
[2] *Ibid.*, s. 4,434–4,439.
[3] *Ibid.*, s. 4,440.
[4] *Ibid.*, s. 4,441.

RESIGNATION AND REMOVAL OF GUARDIAN.—A guardian may resign by writing subscribed by him, filed in the court of probate. Such resignation does not affect the liability of the guardian or his sureties.[1]

A guardian may be removed for removal from the State, wilful failure to file an inventory or wilful disobedience to an order of the court, drunkenness, imbecility of mind, continued sickness rendering him incapable, conviction of felony, waste of the ward's property, neglect of his affairs, or for any other good and sufficient cause.[2]

An application for removal may be made by the ward or by next friend in writing, verified by affidavit, and must specify the grounds of removal. The court must appoint a day for the hearing, of which notice must be given to the guardian of at least five days.

On the day appointed, the court may proceed to hear the evidence and pass upon the application. If determined against the ward the next friend must be taxed with the costs. If against the guardian he must be taxed with costs. The court of probate may, without an application by the ward, for any of the causes specified upon notice, remove a guardian.[3]

PROTECTION OF ESTATE OF INTEMPERATE PERSONS.—When any man over twenty-one years of age is, by reason of intemperance, unfit to manage his estate, or is wasting or squandering it and is thereby in danger of being reduced to poverty or want, his wife or brother or sister or next of kin, or any or either of them, may themselves, or by their next friend if minors, file their bill in chancery to preserve the estate of such intemperate person from further waste and for general relief.[4]

The bill must specify the cause for which relief was prayed and the estate proposed to be secured, and such person with intemperate habits must be made a party defendant. If the allegations of the bill are admitted either expressly or by failure to answer, or it is established by proofs that such person is wasting his estate or is for the causes alleged unfit for its management so that such person will probably be reduced to want, the chancellor must deprive him of all further control over it and provide for its safe-keeping by the appointment of a trustee.

[1] Civil Code, s. 4,452.
[2] *Ibid.*, s. 4,453.
[3] *Ibid.*, s. 4,454–4,457.
[4] *Ibid.*, s. 4,612–4,618.

The trustee appointed must manage and superintend the affairs of the estate and from the avails thereof, provide for the support of such intemperate person or of his wife and children.

Pending the suit, the chancellor must by injunction or otherwise secure the estate against further waste, but no such decree affects the rights of creditors acquired previous to the institution of a suit.

Upon satisfactory proof of the reformation of such intemperate person and of his fitness to have charge of his estate, the chancellor must order it to be restored to him.[1]

Alabama Insane Hospital.—The Bryce Hospital and the Mount Vernon Hospital are State hospitals for the care and proper treatment of insane persons, which are located near the city of Tuscaloosa and in the county of Mobile, respectively.[2] They are managed by a board of seven trustees who have power to fill vacancies.[3] They appoint the superintendent and adopt rules for the hospital.[4]

The superintendent must be a physician, qualified to practise under the existing laws of Alabama. He must be of prompt business habits, and of a humane, kindly disposition.[5]

Patients are admitted to the asylum on papers from the judge of probate in the county where they reside. A person shall be fit to be sent as a patient to an insane hospital, who, in the opinion of the court authorized to hold the inquisition, is mentally so deficient, defective, and disqualified that he needs the restraint, management, and medical treatment of such an institution, for his safe-keeping and improvement, especially if seriously troublesome, offensive, or dangerous. Harmless, incurable dements, dotards, imbeciles, or idiots are not fit patients.[6]

When the hospital is crowded, harmless, incurable patients may be exchanged for urgent, curable, or dangerous cases.[7]

A series of interrogatories are prescribed, to be answered by the probate judge and sent to the superintendent, who shall reply as to room available. The probate judge determines as to the commitment, with or without a jury, and also whether the patient can pay his expenses, and issues a certificate of commitment.[8]

[1] Civil Code, s. 4,612–4,618.
[2] Polit. Code, s. 838–839, 853.
[3] *Ibid.*, s. 840–843.
[4] *Ibid.*, s. 847, 845.
[5] *Ibid.*, s. 847.
[6] *Ibid.*, s. 854.
[7] *Ibid.*, s. 855.
[8] *Ibid.*, s. 856–859.

The superintendent has power to discharge and furlough patients.[1]

The superintendent cannot be required to testify as an expert, if he certifies his absence will interfere with his duties. His deposition may be taken.[2] He and his subordinates are excused from militia service, work on public roads, and serving on juries.[3]

INQUISITIONS AS TO PERSONS ACCUSED OF CRIME.—A person confined under indictment for certain felonies is entitled to separate trial by jury of issue of his sanity. If found insane to be remanded to insane hospital and not tried until recovery. The insanity of a person sentenced to death must be made to appear to the trial court. It may impanel a jury.[4]

Person in confinement for any other reason may be confined in the insane hospital on order of judge of court of record.[5]

Person acquitted of crime or misdemeanor on account of insanity to be confined in asylum if trial court finds that it continues.[6]

The governor may send convicts to the insane hospital if so found by board of three physicians, provided there is room for the patient.[7] All insane convicts shall be reported by the prison physician.[8]

CRIMINAL RESPONSIBILITY.—In criminal trials there is a presumption of responsibility; the burden of proving the contrary is cast on the accused. This defence must be "clearly proved to the satisfaction of the jury."[9]

Insanity as a defence must be specially pleaded: "Not guilty by reason of insanity."[10]

The verdict of not guilty on this ground should specifically find insanity.[11]

CONTRACTS.—Contracts for the purchase of land made in good faith without notice of the insanity are not void, but the insane person may recover the difference between the market value and the price paid. Other contracts are void, excepting liability for necessaries, which is the same as in the case of minors.[12]

ALASKA.

See statutes of Oregon, which by law apply to Alaska.

[1] Polit. Code, s. 867–868.
[2] *Ibid.*, s. 876.
[3] *Ibid.*, s. 874.
[4] Crim. Code, s. 7,178, 7,179.
[5] *Ibid.*, s. 7,180.
[6] *Ibid.*, s. 7,181–7,182.
[7] Polit. Code, s. 871, 873.
[8] Crim. Code, s. 6,525.
[9] *Ibid.*, s. 7,175.
[10] *Ibid.*, s. 7,176.
[11] *Ibid.*, s. 7,177.
[12] Civ. Code, s. 3,347–3,348.

Arizona.

[The references are to the Arizona Civil Code, 1901.]

Care and Custody.—On petition of any relative or friend, the probate judge may on notice to the alleged incompetent hold a hearing to determine whether such person is insane or from any cause mentally incompetent to manage his property.[1]

If so found he must appoint a guardian of his estate and property. Such guardian must give a bond.[2] On petition, inquiry shall be made by the probate judge as to restoration to sanity.[3]

Guardians, Their Powers and Duties.—Every guardian must pay all just debts of the ward, first out of his personal property.[4]

He may with the approbation of the probate judge, compound with debtors, and must appear for the ward in all suits unless another person is appointed for the purpose.[5]

He must manage the estate frugally, and apply the proceeds for the maintenance of the ward and his family, and if the income be insufficient he may sell the real estate upon an order from the court.[6]

The probate judge upon application under oath that a person by reason of insanity is dangerous shall hold an examination summoning two or more witnesses acquainted with the accused, and one (or more) graduates of medicine who shall give opinions as to the insanity of the party charged, whether it is dangerous he should go at large, and whether his malady is temporary. Upon such hearing the judge may if satisfied order the confinement of such person in the territorial insane asylum.[7]

If indigent, the lunatic's expenses in the asylum shall be paid by his county.[8]

Guardian.—If the insane person is able to pay his expenses, the probate judge shall appoint a guardian who may sell his property, except, if the insane person have a family in the territory, what is exempt from execution.[9]

[1] Arizona Civ. Code [1901], s. 1,984.
[2] *Ibid.*, s. 1,985, 1,986.
[3] *Ibid.*, s. 1,987.
[4] *Ibid.*, s. 1,988.
[5] *Ibid.*, s. 1,989.
[6] *Ibid.*, s. 1,990.
[7] *Ibid.*, s. 2,768.
[8] *Ibid.*, s. 2,769.
[9] *Ibid.*, s. 2,770.

Arkansas.

[The referenees are to the Digest of the Statutes of Arkansas, 1904.]

Probate courts possess the superintending control over guardians having the eare, eustody, and management of idiots, lunaties, habitual drunkards, and persons of unsound mind, and may provide for the safe-keeping of sueh persons and maintenance of themselves and their families and the edueation of their children.[1]

Inquisition.—Upon information in writing that any person in the eounty is an idiot, lunatic, or of unsound mind, if satisfied that there is good eause for the exereise of its jurisdietion, the probate court shall eause the person to be brought before such eourt and inquire into the facts by jury.

If any sheriff, coroner, or constable diseovers sueh a person in the county, he shall make applieation to the eourt for the exereise of its jurisdietion.

If found by the jury that the person is of unsound mind, the eourt shall appoint a guardian of the person and estate of sueh insane person.

The eosts of the proeeeding shall be a charge on his estate, or if that is insuffieient, upon the eounty. If the person alleged to be insane is discharged, the eosts are paid by the person instituting the proeeedings, unless sueh person is an offieer, in whieh case the eosts shall be paid by the eounty.[2]

Guardians, their Powers and Duties.—Before entering upon his duties, the guardian shall execute a bond for the faithful performanee of such duties and the judieious management of the estate of his ward.

Additional bonds may be required, in the diseretion of the court.

The guardian shall take eharge of the person committed to his eharge and provide for his support and maintenance. He shall take into his possession the goods, ehattels, moneys, and all evidences of debt and of writing touching the estate of the person under his guardianship.

Within three months he shall make out and file in the offiee of the elerk of the court an inventory of the estate of his ward.

[1] Statutes of Arkansas, s. 3,814. [2] *Ibid.*, s. 3,815–3,819.

Additional inventories shall be filed whenever other property belonging to the estate shall be discovered.

The court may make orders for the restraint, support, and safe-keeping of such person; for the maintenance of his estate and the support and maintenance of his family and education of his children, out of the proceeds of his estate.[1]

Sale, Mortgage, and Lease of Real Estate.—If the personal estate be insufficient for the discharge of the debts and maintenance of the family, or education of the children of the insane ward, or if it shall clearly appear to the court that it would be for the benefit of the ward, or if there are joint owners and it would be for their benefit and not detrimental to the ward, the guardian may petition the court for authority to mortgage, lease, or sell such part of the real estate as is necessary to supply the deficiency.

The court shall direct the time and terms of the sale, mortgage, or lease, and the manner in which the proceeds shall be secured and the income applied. The court shall direct the manner of making the sale, which shall be at public vendue to the highest bidder, and the guardian shall report the proceedings to the court. If the court approve the proceedings, the guardian shall execute a deed to the purchaser. If the report be disapproved, the court may set aside the sale and order the refunding of all money paid.

When the court shall order a lease or mortgage, no deed or instrument shall be executed until approved by the court.[2]

When Ward may be Supported by County.—If the estate of any ward is insufficient to maintain himself and family, or educate his children, his guardian may apply to the county court for an appropriation from the county treasury for the support of his ward.

The petition shall be accompanied by an account of his guardianship, an inventory of the estate of the ward, and a list of the debts due from such ward. If the court is satisfied that the estate is insufficient for such purposes, it may order such sum to be paid to the guardian out of the county treasury as is sufficient to provide for the support of his ward.[3]

Restoration of Insane Person.—If any person allege in

[1] Statutes of Arkansas, s. 3,821–3,831.

[2] *Ibid.*, s. 3,832–3,844.

[3] *Ibid.*, s. 3,848–3,851.

writing that the person declared of unsound mind is restored to his right mind, or to correct and sober habits, the court shall cause the facts to be inquired into, and if it be found that such person has been restored, he shall be discharged from care and custody and his property shall be restored to him.[1]

SETTLEMENT OF ACCOUNTS OF GUARDIAN.—All accounts of guardians shall be settled on the termination of the guardianship. The guardianship is terminated by the restoration of the ward, his death, or removal from office.[2]

CONFINEMENT OF INSANE PERSON BY GUARDIAN.—If a person be furiously mad, or so far disordered in his mind as to endanger his own person or the person or property of others, it shall be the duty of the guardian, or the person under whose care he may be, and who is bound to provide for his support, to confine him in some suitable place until the probate court shall make an order for his proper restraint, support, and safe-keeping.

If such person is not confined, any judge of a court of record, or any two justices of the peace, may cause such insane person to be apprehended, and may provide for his confinement in some suitable place until the court shall make further order thereon.[3]

Any peace officer may arrest an insane person found at large and uncared for, and take steps to have him sent to the lunatic asylum.[4] The maintenance of the insane is a charge on the county, which may recover the same from father or mother, children or grandchildren.[5]

LUNATIC ASYLUM.—The Arkansas State lunatic asylum is located at Little Rock. It is governed by a board of trustees of the State institutions, composed of six members appointed by the governor.[6]

The trustees shall appoint a superintendent, who shall be a skilful physician, a married man, and hold his office for a term of four years; also a steward.[7]

They shall maintain an effectual inspection of the asylum, for which purpose, one or more of them shall visit it, at least once in every week and the whole of such board once in three months, holding a meeting. They shall report biennially.[8]

[1] Statutes of Arkansas, s. 3,852–3,853.
[2] *Ibid.*, s. 3,854–3,857.
[3] *Ibid.*, s. 3,858, 3,859.
[4] *Ibid.*, s. 3,861–3,862.
[5] *Ibid.*, s. 3,864–3,865.
[6] *Ibid.*, s. 3,976, 3,928–3,931.
[7] *Ibid.*, s. 3,977–3,978.
[8] *Ibid.*, s. 3,979–3,983.

THE SUPERINTENDENT.—The superintendent appoints all subordinate officers, and is the general superintendent of the buildings, grounds, and farm, with all their fixtures and stock, and has the direction and control of all persons therein, subject to the by-laws and regulations of the trustees. He shall daily ascertain the condition of the patients and prescribe their treatment.[1] The steward is the accounting officer.[2]

ADMISSION TO ASYLUM.—Any person may be admitted to the asylum as a patient who is a citizen of the State, and who may be insane.

Any reputable citizen may file a written statement with the county and probate judge, that to the best of his belief the alleged insane person ought to be admitted, and that his being at large is dangerous to the community or prejudicial to his chances to recover.

Thereupon a time shall be appointed by the judge for a hearing, and at such time such competent witnesses as are produced shall be heard. In addition to the testimony of such witnesses the judge shall cause the alleged insane person to be examined by one or more physicians, who shall present in writing the result of the examination, including the answers to certain questions which are prescribed by statute.

If satisfied that such person is insane, he shall so decide, and without delay transmit to the superintendent of the asylum his decision in writing with copies of the statements taken in the proceeding.

The superintendent shall notify the judge of his readiness to admit the insane person into such asylum, if there be room unoccupied. If there be no room unoccupied he shall notify the judge of the fact and return the papers indorsed accordingly.

On receipt of notice of the superintendent's willingness to receive the patient he shall be transferred to such asylum by the sheriff or any person deputized by the county judge.

Such person shall be supported in such asylum at public expense unless such insane person have more than sufficient estate for the support of his family.

The superintendent and trustees are supreme in the matter of admissions and discharges.[3]

[1] Statutes of Arkansas, s. 3,984.
[2] *Ibid.*, s. 3,985–3,987.
[3] *Ibid.*, s. 3,990–4,014.

CRIMINAL INSANE.—Persons acquitted of crime upon the plea of insanity are admitted to the asylum upon the certificate of the judge; also persons who are indicted and cannot be tried by reason of insanity.[1]

Upon the recovery of such persons the sheriff of the county shall be notified.[2]

Persons who become insane while under sentence for crime are to be treated in the penitentiary.[3]

"A lunatic or insane person, without lucid intervals, shall not be found guilty of any crime or misdemeanor with which he may be charged."[4]

CALIFORNIA.

[The references are to Kerr's Cyclopædic Codes of California, vols. i.–iv., 1905, and General Laws of California, Henning, vol. v. of the same set, 1905.]

NOTE.—In California and Georgia some matters of general law have been codified. As an exhibit of the present state of the law respecting insanity, we quote in full several of the more important sections stating (with or without modification) principles of the common law.

CONTRACTS.—"A person entirely without understanding has no power to make a contract of any kind, but he is liable for the reasonable value of things furnished to him necessary for [1] his support or [2] the support of his family."[5]

"A conveyance or other contract of person of unsound mind but not entirely without understanding, made before his incapacity has been judicially determined, is subject to rescission, as provided in the chapter on rescission of this code."[6]

"After his incapacity has been judicially determined, a person of insane mind can make no conveyance or other contract, nor delegate any power or waive any right, until his restoration to capacity. But a certificate from the medical superintendent or resident physician of the insane asylum to which such person may have been committed, showing that such person has been discharged therefrom cured and restored to reason, shall establish the presumption of legal capacity in such person from the time of such discharge."[7]

[1] Statutes of Arkansas, [1901], s. 4,001–4,002, 1,440.
[2] *Ibid.*, s. 4,003–4,004.
[3] *Ibid.*, s. 4,005.
[4] *Ibid.*, s. 1,439.
[5] Vol. 2, s. 38, p. 51.
[6] Vol. 2, s. 39, p. 54. Cf. s. 1,556–1,557, pp. 1,265–1,266.
[7] Vol. 2, s. 40, p. 58.

A proposal for a contract is revoked by the insanity of the proposer.[1]

Every employment in which the power of the employee is not coupled with an interest in its subject is terminated by notice to him of his employer's legal incapacity to contract or by the employee's legal incapacity to act as such.[2]

An agency is likewise terminated.[3]

Annulment of marriage may be decreed when one party was insane at the time of the marriage.[4]

TORTS.—A "person of unsound mind, of whatever degree, is civilly liable for a wrong done by him, but is not liable in exemplary damages unless at the time of the act he was capable of knowing that it was wrongful."[5]

APPOINTMENT OF GUARDIANS OF INSANE AND OTHER INCOMPETENT PERSONS.—Power of appointment vested in Superior Court.

Appointment made upon petition of relative or friend that such person is insane or for any cause incompetent to manage his property.

Notice to be given such person not less than five days before hearing. If it appears upon the hearing that the person is incapable of taking care of himself and managing his property, guardian must be appointed.[6]

PROCEEDINGS TO DETERMINE RESTORATION OF INSANE.—Insane person or any relative or friend may apply by petition to court to have the fact of his restoration judicially determined.

Court must appoint a day for hearing and upon request order investigation before a jury. Notice of the trial must be given to the guardian of the person, to his or her husband or wife, or to his or her father or mother, if living in the county.

Guardian or relative of such person may contest the right to the relief demanded.[7]

POWERS AND DUTIES OF GUARDIANS.—Guardian has the care and custody of the person of his ward and the management of all his estate.[8]

Guardian must pay all the ward's debts out of his personal

[1] Vol. 2, s. 1,587, p. 1,319.
[2] Vol. 2, s. 1,996–1,997, pp. 1,631–1,632.
[3] Vol. 2, s. 2,355–2,366, pp. 1,819–1,820.
[4] Vol. 2, s. 82, p. 130.
[5] Vol. 2, s. 41, p. 59.
[6] Code Civil Pro., s. 1,763–1,764.
[7] *Ibid.*, s. 1,766.
[8] *Ibid.*, s. 1,765.

estate or income of his real estate, if sufficient; if not, then out of real estate upon obtaining order for sale.

Must settle all accounts of the ward, demand, sue for, and receive all debts due him.

Manage the estate of his ward frugally and without waste, and apply the income for suitable maintenance of ward and his family; and if insufficient, may sell the real estate upon order of the court and apply the proceeds of such sale for such maintenance.

Guardian to be allowed credits for proper advances for the benefit of the ward upon proper vouchers, etc. Guardian may be compelled to furnish suitable maintenance, etc. The court may direct the guardian to pay the persons supplying ward with suitable maintenance, etc.

Guardian may join in and assent to a partition of the real estate of the ward.

Guardian must return to the court an inventory of the estate of his ward within three months after his appointment and annually thereafter. Inventories must be recorded by the clerk of the court.

Guardian must upon the expiration of a year from the time of his appointment, and as often as required, present to the court his account for a settlement.

Every guardian must be allowed the amount of his reasonable expenses, and have such compensation as the court deems just and reasonable.[1]

Sale of Property of Ward and Disposition of Proceeds.—When income of estate is insufficient to maintain the ward and his family, guardian may sell real or personal estate upon order of the court. Court may order the sale of the property of the ward for the purpose of reinvestment.

The proceeds of the sale must be applied to the purposes for which made and the residue invested until the capital is wanted for such purposes.

If sold for purposes of investment, investment must be made according to guardian's best judgment or in pursuance of an order of the court.

Order must be made upon petition containing a statement of facts and circumstances showing necessity for the sale.

[1] Code Civil Proc., s. 1,768–1,776.

Notice must be given to the next of kin.

A copy of the order must be served on the next of kin and all persons interested in the estate at least fourteen days before a hearing of the petition.

The order of the court must specify the causes of the sale.

Guardian authorized to sell real estate must give a bond approved by the court.

Such order not to continue for more than one year after being granted.[1]

General Provisions.—Court may cite persons suspected of having concealed, embezzled, or conveyed any of the property belonging to the ward or to his estate, upon complaint of guardian, ward, creditor, or other person interested in the estate, and may summon him in the same manner as persons suspected of concealing the effects of a decedent.[2]

Guardian may be removed if incapable of discharging his trust, or if he has wasted or mismanaged the estate, or failed for thirty days to render an account as required by the court. A guardian may resign when it appears proper to allow the same.[3]

Guardianship is terminated when it appears that it is no longer necessary.[4]

Court may require a new bond by the guardian when deemed necessary.

Every bond of a guardian must be filed in the office of the clerk of the Superior Court of the county.

No action can be maintained on such bond unless commenced within three years after the discontinuance of the guardianship.

No action can be maintained for the recovery of any estate sold by a guardian unless commenced within three years from the termination of the guardianship.[5]

Custody of Insane Persons.—Persons of unsound mind may be placed in an asylum upon the order of the superior court of the county in which he resides, as follows:

1. The court must be satisfied upon examination in open court and in the presence of the person from the testimony of two reputable physicians that such person is of unsound mind and unfit to be at large.

[1] Code Civil Proc., s. 1,777–1,792.
[2] *Ibid.*, s. 1,800.
[3] *Ibid.*, s. 1,801.
[4] *Ibid.*, s. 1,802.
[5] *Ibid.*, s. 1,803–1,805.

2. After the order is granted the person alleged insane, his or her husband or wife or relative to the third degree, or any citizen, may demand an investigation before a jury, which must be conducted in all respect as under an inquisition of lunacy.[1]

EXAMINATION AND COMMITTAL OF INSANE PERSONS.—Whenever it appears by affidavit to the satisfaction of a magistrate of the county that any person within the county is so far disordered in his mind as to endanger health, persons, or property, he must issue and deliver to some peace officer a warrant directing that such person be arrested and taken before any judge of a court of record within the county for examination.[2]

Judge must issue subpœnas to two or more witnesses best acquainted with such insane person to appear and testify before him, and have at least two graduates of medicine appear and attend such examination. Each person subpœnaed must appear and answer all questions pertinent to the matter. The physicians must hear such testimony and make a personal examination of the alleged insane person.[3]

Physicians after hearing testimony and making examination must make a certificate if they believe such person to be dangerously insane—

1. Showing that such person is so far disordered in his mind as to endanger health, person, or property.

2. Premonitory symptoms, apparent cause or class of insanity, and the duration and condition of the disease.

3. The nativity, age, residence, occupation, and previous habits of the person.

4. The place from whence the person came and the length of his residence in this State.

The service must be made in the form prescribed by the medical superintendent of the asylum.[4]

The judge, if he believes the person so far disordered in his mind as to endanger health, person, or property, must make an order that he be confined in the insane asylum. A copy of such order shall be filed and recorded by the county clerk.

Clerk shall keep an index book showing data connected with the commitment.[5]

[1] Civil Code, s. 258.
[2] *Ibid.*, s. 2,210.
[3] *Ibid.*, s. 2,211–2,214.
[4] *Ibid.*, s. 2,215–2,216.
[5] *Ibid.*, s. 2,217

The physicians attending each examination of an insane person are allowed five dollars each, to be paid by the county treasurer of the county where the examination was had, on the order of the board of supervisors.

Colorado.

[The references are to Mills' Annotated Statutes, 1891, with supplementary volume (vol. iii.), 1905; and to Mills' Annotated Code (of Civil Procedure), 1905.]

In the construction of the Code of Civil Proeedure, "The phrase 'of unsound mind' includes idiots, *non compos mentis*, lunatics, and distraeted persons." "The phrase 'under legal disabilities' includes infants and persons of unsound mind."[1]

The provisions for care and custody apply to the foregoing and also to "every person who by reason of intemperance, or any disorder or unsoundness of mind, shall be incapable of managing and caring for his own estate."[2]

In an action against one judicially declared incompetent, the summons is served on guardian.[3]

Procedure for Appointment of Conservator of Estate.—Complaint to county court of any reputable person; jury of six persons; proof to court that lunatic or insane person owns property; verdict of jury, "sueh person is so insane, or distracted in mind, as to render him or her ineapable of managing his or her estate"; eonservator appointed by the court.[4]

Care and Custody.—The court may also, when a lunatic so adjudged has no friend or relative who will assume the care of him, order the lunatie placed in a State asylum or other hospital or place suitable for the treatment of the insane. If the lunatic has property the expense of care is to be paid from it, but not for treatment in the State asylum.[5]

Discharge on reeovery may be had on the finding of two physicians, or the ecrtificate of the superintendent of the State asylum.[6]

Commitment of Other Lunatics.—Lunaties may be confined: (1) On the complaint to the county eourt of two reputable persons or of an authorized medical examiner alleging that the

[1] Code of Civil Proc., s. 442.
[2] Mills' Ann. Stats. [1891], s. 2,968.
[3] Code of Civil Proc., s. 38.
[4] Mills' Ann. Stats. [1905], s. 2,935.
[5] *Ibid.*, s. 2,957.
[6] *Ibid.*, s. 2,961.

person "is so insane or distracted in his mind, as to endanger his own person and property or the person and property of another, or others, if allowed to go at large"; (2) on the complaint of a sheriff; (3) on the election of the insane person. An inquest shall be held as above and pending the inquest the lunatic may be confined. Commitment follows to a State hospital or elsewhere for treatment.[1]

No insane person shall be confined in jail unless he is violent and it is absolutely necessary. Infraction of this law is a misdemeanor.[2]

Ten days' notice of the inquest must always be given the alleged lunatic, and a guardian *ad litem* appointed for him. Every inquest is to be conducted in the name of the people, and in case of a person charged with crime there must be notice to the district attorney.[3]

All expenses for maintenance shall be paid by the county of the lunatic's residence, and are recoverable by the county from any person liable to maintain the lunatic.[4]

EXAMINERS IN LUNACY.—It is not lawful for any physician to testify to the insanity of any person "for the purpose of securing his commitment to custody," unless he is of reputable character, a graduate of some incorporated medical college, a permanent resident of the State, and in the actual practice of his profession; possession of such qualifications is to be certified by a judge of a court of record; such certificate constitutes such physician "an examiner in lunacy"; a copy of such certificate is to be filed with the clerk of the county court where the physician resides; it is unlawful for any examiner in lunacy, except the superintendent of the State asylum, to testify to the insanity of any person to procure commitment to an asylum of which said examiner is the proprietor or an officer or a regular medical attendant.[5] The penalty is fine or imprisonment or both.[6] A medical examiner's fee is $10, and mileage, ten cents per mile.[7]

PROVISIONS RELATING TO THE "COLORADO INSANE ASYLUM."—New buildings are to be on the "cottage plan."[8] There shall be a separate ward for the criminal insane.[9] Persons are to be

[1] Mills' Ann. Stats. [1905], s. 2,962.
[2] *Ibid.*, s. 2,962a.
[3] *Ibid.*, s. 2,963.
[4] *Ibid.* [1891], s. 2,963–2,965.
[5] *Ibid.* [1905], s. 2,962b.
[6] *Ibid.*, s. 2,962c.
[7] *Ibid.*, s. 2,962d.
[8] *Ibid.* [1905], s. 2,970b.
[9] *Ibid.*, s. 2,970c.

confined therein who have committed certain high crimes or misdemeanors; those charged with the same who are believed to feign insanity or of whose insanity there is great doubt; those acquitted of the same on the ground of insanity and adjudged dangerous persons; those charged with the same and becoming insane before trial or sentence; those who have committed any crime and have no friends or relatives to care for them on expiration of sentence; insane convicts generally whose insanity has been ascertained and transfer ordered.[1]

Connecticut.

[The references are to the General Statutes of Connecticut, Revision of 1902.]

Care and Custody.—The commitment of the insane or idiots to an asylum is vested in the district court of probate, upon complaint of any person. Notice of the application must be given to him, and, as directed, to friends, etc. Testimony may be taken and the certificate of two resident graduate physicians obtained.[2] The superior court also has jurisdiction through a commission.[3]

The indigent insane are similarly committed and their support paid by the town and State.[4]

On application by the town selectmen or relatives, and on similar notice, the court of probate may commit "an habitual drunkard, a dipsomaniac, or one so addicted to the intemperate use of narcotics or stimulants as to have lost the power of self-control" to an inebriate asylum. The physicians' certificate must be obtained. Voluntary patients may be received and retained for one year.[5]

Any person aggrieved may appeal from any order of the court. The superior court then rehears the matter.[6]

The court of probate may order the discharge of a person confined as insane.[7] The writ of habeas corpus also lies.[8]

On a bond being given for the proper confinement of one insane, commitment to an asylum may be suspended.[9]

[1] Mills' Ann. Stats. [1905], s. 2,970d.
[2] Connecticut General Statutes, s. 2,735–2,741.
[3] *Ibid.*, s. 2,768–2,769.
[4] *Ibid.*, s. 2,742–2,743.
[5] *Ibid.*, s. 2,744–2,749.
[6] *Ibid.*, s. 2,751–2,752.
[7] *Ibid.*, s. 2,756.
[8] *Ibid.*, s. 2,760.
[9] *Ibid.*, s. 2,753.

Private asylums are subject to the visitation of the State Board of Charities.[1] They must be licensed by the governor.[2]

Fraudulently causing or attempting to cause the confinement of a person as insane is punishable.[3]

A judge of the superior court may appoint a commission to inquire whether any person is unjustly confined, who shall investigate.[4]

The twelve trustees appointed by the governor have the government of the Connecticut Hospital for the Insane, at Middletown.[5]

Pauper or indigent imbecile children may be sent to the school for imbeciles at Lakeville upon application of the town selectmen and order of the court of probate.

Criminal Insane.—Any person committed for trial appearing to be insane may if so found after a hearing and on the report of three physicians, be committed by the superior court to the State asylum.[6]

Any person acquitted on the ground of insanity or dementia may be confined in the State hospital for such time as the court may direct.[7]

Upon his application or that of the officers of the asylum, notice to the town selectmen, to the person if any upon whom the offense charged was committed, and to the State's attorney, he may be discharged.[8]

Upon the expiration of the term fixed for his confinement or that of the sentence of an insane convict, he may be further confined if still insane.[9]

Insane convicts in a jail, or female insane convicts in the State prison, may be removed to the hospital or returned to jail therefrom, upon the report of the jailer to the governor and the opinion of a commission of not more than three experts.[10] In the State prison an insane ward is provided for males.[11]

If any insane or idiotic person is about to be confined in the State prison the warden shall report the date of his discharge to the Connecticut Prison Association, which sees to his return to his town selectmen, etc.

[1] Connecticut General Statutes, s. 2,765–2,766.
[2] *Ibid.*, s. 2,772.
[3] *Ibid.*, s. 2,767.
[4] *Ibid.*, s. 2,770.
[5] *Ibid.*, s. 2,773–2,777.
[6] *Ibid.*, s. 1,472.
[7] *Ibid.*, s. 1,473.
[8] *Ibid.*, s. 1,474, 2,780.
[9] *Ibid.*, s. 1,475, 2,784.
[10] *Ibid.*, s. 2,782–2,786.
[11] *Ibid.*, s. 2,904, 2,906.

STATUTES OF LIMITATION, ETC.—They are usually suspended during insanity, etc.[1]

The wife of an insane husband has power to deed upon authorization of the court of probate.[2]

WILLS.—All persons of the age of eighteen "and of sound mind" may dispose of their property by will.[3]

CONSERVATORS.—The court of probate may appoint a conservator of the estate of any person who "shall be found to be incapable of managing his affairs."[4] Some form of notice to such person is required.[5]

Pending such an application, properly filed with the town clerk, no contract is valid unless approved by the court.[6]

The conservator has the usual powers and duties. He may apply the principal as well as the income, if necessary, to support the incompetent and his family. The court may order the sale of the real estate.[7]

Non-residents' property may be taken by a conservator appointed here.[8]

Upon the removal of the insane person to another town a new resident conservator may be appointed.[9]

DELAWARE.

[The references are to Revised Statutes of the State of Delaware, 1893.]

CARE AND CUSTODY.—The court of chancery has the care of the insane over twenty-one years of age, so far as to appoint a trustee of the person and estate. The inquiry is by jury.[10]

The statute provides that the trustee shall have the usual powers and duties, and file a bond. The chancellor may direct the sale of the real estate, and receive and invest the proceeds. For the maintenance of the insane person the income may be expended, and for his support or the repair or improvement of his real estate a specified sum may be expended. The timber on his land may be sold for the same purpose.[11]

[1] Connecticut General Statutes, s. 1,108–1,110.
[2] *Ibid.*, s. 247.
[3] *Ibid.*, s. 292.
[4] *Ibid.*, s. 237.
[5] *Ibid.*, s. 238.
[6] *Ibid.*, s. 239.
[7] *Ibid.*, s. 240–241, 243.
[8] *Ibid.*, s. 242.
[9] *Ibid.*, s. 244.
[10] Chap. 49, s. 1; p. 381.
[11] *Ibid.*, s. 2–6.

Barring insane wife's dower on a conveyance; see reference in the note.[1]

A foreign trustee may acquire such powers by filing a certificate of his appointment with the clerk of the court and of having given a bond. Under authority of the chancellor he may remove property.[2]

The indigent insane may be sent to the insane department of the New Castle County Almshouse (now Delaware State Hospital) by the governor upon recommendation of the chancellor, upon the application of relatives or friends, the certificate of the physician of the county almshouse and another, and the report of the county trustees of the poor, that treatment may be of benefit (see also below). If cured or incurable he may be discharged or returned to the almshouse of his county.[3]

The nine trustees have full control of the Delaware State Hospital at Farnhurst. Three are appointed from each county. The cost of maintenance of the hospital is borne by the State.[4]

The indigent insane may be admitted to the hospital upon the written order of a trustee, or of any two county trustees of the poor, and the certificate of two physicians, sworn to. If the "insane person shall be able, after a reasonable and proper provision is made for the support and education of his family, to support himself, he shall be liable for his support."[5]

The hospital may receive paying patients from Delaware or other States.[6]

The associate judges of the superior court are trustees for indigent imbecile children, and may commit them to the Pennsylvania training-school for feeble-minded children, Media, Pa. But the number to be committed and the appropriation to pay for their support are limited.[7]

Criminal Insane.—If the defense of insanity shall be made and established in a criminal case "to the satisfaction of the jury" they may return a verdict of "not guilty by reason of insanity." A commitment to an almshouse or asylum results. The court of the county where he was tried may order him set at large.[8]

[1] Chap. 616, vol. 17; p. 634.
[2] Chap. 49, s. 7–9.
[3] Chap. 92, vol. 18, s. 1–3; p. 384.
[4] Chap. 553, vol. 18; p. 385.
[5] *Ibid.*, s. 6, 9, also c. 644, vol. 19, s. 1–7; p. 387; c. 48, s. 22; p. 379.
[6] *Ibid.*, s. 7.
[7] Chap. 53, vol. 12; pp. 387–588.
[8] Chap. 397, vol. 11, s. 1–2; pp. 382–383.

In a capital case the court may appoint a commission, two of whom are physicians, to inquire into the criminal's mental condition. They may take testimony. If he is found insane he shall not be executed until he recovers.[1]

Insane persons confined in jail may be removed to the almshouse.[2]

DEFINITION.—In the statutes "the words 'insane person' shall be construed to include every idiot, *non compos*, and lunatic person.[3]

WILLS.—Any person of the age of twenty-one years "of sound and disposing mind and memory" may make a will.[4]

FLORIDA.

[The referenees are to the Revised Statutes of Florida, 1906.]

The terms "insane person" and "lunatic" inelude every idiot, *non compos*, lunatic, and insane person.[5]

INQUIRY AS TO LUNACY.—Upon a petition signed by five citizens, not more than one of whom is a relative, setting forth that a resident of Florida is insane, either *non compos mentis* or sufficiently devoid of reason to be incapable of self-control, the county judge or judge of the circuit court having jurisdiction shall appoint a commission of three, two of whom are physicians.

If it be found by the commission that such person is a lunatie, the judge may confirm the report and pass the usual order or decree.

If it appear that the lunatic is destitute, then such person shall be transported to the asylum for the indigent insane and delivered to the officer having charge of the same, provided, however, that if the insanity is chronic and harmless, or caused by epilepsy or senility, the judge may direct the lunatie to be delivered to the county commissioners, who must provide for his care, custody, and maintenanee.[6]

GUARDIANS.—County judges may appoint guardians of persons adjudged insane or lunatic, who have the same powers as guardians of infants.[7]

POWERS OF GUARDIANS.—Guardians may make contracts

[1] Chap. 79, vol. 17; pp. 383, 384.
[2] Chap. 8, s. 31; p. 85.
[3] Chap. 5, s. 1, subd. 5; p. 43.
[4] Chap. 84, s. 2.
[5] Revised Statutes of Florida, s. 1.
[6] *Ibid.*, s. 1,200–1,203.
[7] *Ibid.*, s. 2,629–2,630.

relative to the person and estate of lunaties, but before such contracts shall bind the estate they must be confirmed by the eireuit court. The real estate may be sold on applieation of their guardians in the same manner as the real estate of infants.[1]

Criminal Insane.—When an accused is acquitted on the ground of insanity (to be specifically so found by the jury) and is manifestly dangerous at large, the judge may commit him to jail or to the care of friends giving bond.[2]

Georgia.

[The references are to the Georgia Codes, 1895, Supplement, 1901.]

Note.—In Georgia and California some matters of general law have been codified. As an exhibit of the present state of the law respecting insanity we quote in full several of the more important sections, stating (with or without modification) principles of the common law.

"Lunatic," "insane," or "*non compos mentis*," each includes all persons of unsound mind.[3]

Courts of ordinary have authority to exercise original, exclusive, and general jurisdiction of the following subjects:

5. The appointment and removal of guardians of persons of unsound mind.

6. All controversies as to right of guardianship.[4]

Guardians.—The ordinaries of the several counties of this State may appoint guardians for idiots, lunatics, and insane persons, deaf and dumb persons when incapable of managing their estates, habitual drunkards or persons imbecile from old age or other causes and incapable of managing their estates.[5]

Guardians shall take the same oath and give a like bond as guardians of minors, and their powers, duties, and liabilities shall be the same and be exercised under the same rules and regulations.[6]

A wife shall in all cases be entitled to preference to the appointment as guardian.[7]

Commission to Inquire as to Lunacy.—Commission granted upon petition of any person. Commission shall be

[1] Revised Statutes of Florida, s. 2,631–2,632.
[2] *Ibid.* [1891], s. 2,922.
[3] Civ. Code, s. 5. Crim. Code, s. 2.
[4] Civil Code, s. 4,232.
[5] *Ibid.*, s. 2,570.
[6] *Ibid.*, s. 2,571.
[7] *Ibid.*, s. 2,572.

directed to eighteen proper persons, one of whom shall be a physician. Require any twelve of them, including the physician, to examine the person by inspection for whom guardianship or commitment to the asylum is sought, to hear and examine witnesses as to his condition and capacity to manage his estate, and to make return of such examination to the said ordinary, specifying in such return into which of said classes they find the person to come.

Upon such return, if the person be found insane, the ordinary shall appoint a guardian or commit him to an asylum.

An appeal may be had by persons dissatisfied and interested in the application for the commission upon bond, etc., to the superior court of the county.

Guardians may be appointed without a trial when the lunatic is in the asylum upon commitment.[1]

Revocation of Guardianship.—Upon restoration to sanity and capacity of any person for whom a guardian is appointed, such person may petition the ordinary praying the revocation of the guardianship. The ordinary shall examine into the truth, and if satisfied, and the guardian consenting thereto, the ordinary shall grant the prayer and deliver to such person his property and effects.

If the ordinary is not satisfied as to the truth of the petition, the question shall be tried before a jury.[2]

Confinement of Ward.—Guardians of insane persons are authorized to confine them if such a course is necessary, either for their protection or for the safety of others; and a guardian wilfully failing to take such precaution with his ward shall be responsible for injuries inflicted on others by such ward.

Where there is no guardian or the guardian refuses to confine his ward, and any person shall make oath that such insane person should not longer be left at large, the ordinary shall issue a warrant for the arrest of such person, and on an investigation of the facts may commit him to a lunatic asylum and if necessary cause him to be temporarily confined in a jail.[3]

Expenses of Proceedings: How Paid.—Where the estate of an insane person is insufficient to defray the expenses of conducting the proceedings inquiring as to his lunacy and for

[1] Civil Code, s. 2,573–2,575, 2,584–2,587.

[2] *Ibid.*, s. 2,578–2,579.

[3] *Ibid.*, s. 2,581–2,582.

carrying or conveying such insane person from the county to the State lunatic asylum, when committed to such asylum, then the county shall defray such expenses.[1]

LUNATIC ASYLUM.—The State lunatic asylum at Midway is managed by ten trustees, one a physician, appointed by the governor. The trustees have general authority over the asylum, appointing all officers. They shall visit the asylum monthly by one of the board, and annually by all of them.[2]

The asylum is open to all residents who are lunatics, idiots, epileptics, or demented inebriates, but harmless lunatics may be discharged. Paying patients are admitted. All must pay when able.[3]

The trustees hold examinations for appointments as physicians at the asylum.[4]

The superintendent has general control subject to the trustees.[5]

CRIMINAL INSANE.—Insane convicts may be admitted to the asylum on certificate of the ordinary.[6]

Persons acquitted of crime on account of insanity may be committed by the court to the asylum; in the case of capital crime he cannot be discharged except by special act of the legislature; in other cases by order of the governor.[7]

No lunatic shall be tried while in that condition.[8]

An idiot or "a lunatic or person insane, without lucid intervals, shall not be found guilty. . . . *Provided*, the act so charged as criminal was committed in the condition of such lunacy or insanity; but if a lunatic has lucid intervals of understanding, he shall answer for what he does in those intervals as if he had no deficiency."[9]

CONTRACTS.—"An insane person cannot contract prior to commission sued out and guardian appointed. A lunatic may contract during lucid interval; after guardianship he cannot; nor can a person restored to sanity contract until the guardianship is dissolved. Necessaries furnished an insane person may be recovered upon the same proof as if furnished to infants."[10]

"A drunkard, when actually intoxicated to such an extent as

[1] Civil Code, s. 2,583.
[2] *Ibid.*, s. 1,409–1,413, 1,421–1,422.
[3] *Ibid.*, s. 1,414, 1,416, 1,429–1,434, 1,435–1,442.
[4] *Ibid.*, s. 1,423–1,424.
[5] *Ibid.*, s. 1,427–1,428.
[6] *Ibid.*, s. 1,446–1,448; Crim. Code, s. 1,183–1,185.
[7] Civil Code, s. 1,451; Crim. Code, s. 951–952, 1,047–1,049.
[8] Crim. Code, s. 953.
[9] *Ibid.*, s. 35, 36.
[10] Civil Code, s. 3,652, 3,647, 3,653.

to deprive him of reason, can make no valid contract with any one cognizant of the fact of his condition. If the party contracting was at all instrumental in producing the state of intoxication, the contract is invalid, however partial the intoxication may be."[1]

WILLS.—"An insane person cannot generally make a will. A lunatic may, during a lucid interval. A monomaniac may make a will, if the will is in no way the result of or connected with that monomania. In all such cases it must appear that the testament does speak the wishes of the testator, unbiassed by the mental disease with which he is affected."[2]

"Eccentricity of habit or thought does not deprive a person of power of making a testament; old age, and the weakness of intellect resulting therefrom, does not, of itself, constitute incapacity. If that weakness amounts to imbecility, the testamentary capacity is gone. In cases of doubt as to the extent of this weakness, the reasonable or unreasonable disposition of his estate should have much weight in the decision of the question."[3]

"An incapacity to contract may coexist with a capacity to make a will; the amount of intellect necessary to constitute testamentary capacity is that which is necessary to enable the party to have a decided and rational desire as to the disposition of his property. His desire must be decided, in distinction from the wavering, vacillating fancies of a distempered intellect. It must be rational, in distinction from the ravings of a madman, the silly pratings of an idiot, the childish whims of imbecility, or the excited vagaries of a drunkard."[4]

CIVIL RIGHTS.—Insane persons and habitual drunkards have their persons and estates or either of them placed in the control of guardians, but "retain all the rights of citizens which they have the capacity to enjoy, and which are compatible with their situation." Their domicile is that of their guardians.[5]

HAWAII.

[The references are to the Revised Laws of Hawaii, 1905.]

INSANE ASYLUM.—The Insane Hospital is located at Honolulu. The judges of the circuit and district courts have power

[1] Civil Code, s. 3,654.
[2] *Ibid.*, s. 3,266.
[3] *Ibid.*, s. 3,267.
[4] *Ibid.*, s. 3,268.
[5] *Ibid.*, s. 1,812, 1,828.

to commit persons on a satisfactory complaint showing that public safety requires the commitment.[1]

It is under the management of the board of health.[2]

Upon application of relatives or friends a judge of the circuit court may appoint a guardian.[3]

CRIMINAL INSANE.—Persons acquitted for insanity may be committed to the asylum.[4]

The insanity of indicted persons may be tried by a special jury.[5]

IDAHO.

[The References are to Idaho Codes Annotated, 1901.]

APPOINTMENT OF GUARDIAN.—Probate judge on petition of any relative or friend may on notice to the person and after a hearing at which the person shall be present if able, appoint a guardian of his person and estate with the usual powers, who shall give bond.[6]

Restoration may be found by another hearing, with trial by jury if requested.[7]

When it appears to the satisfaction of a magistrate of the county that any person within the county is so far disordered in mind as to endanger health, person, or property, he must issue and deliver to some peace officer for service a warrant directing that such person be arrested and taken before any judge of the court of record within the county for examination.

Judge to issue subpœnas for at least one graduate of medicine to attend such examination.

Physician to hear testimony and make a personal examination of the alleged insane person.

If the physician believes the person to be dangerously insane, he must make a certificate in his own handwriting showing, as near as possible—

1. That such person is so far disordered in his mind as to endanger health, person, or property.

2. The premonitory symptoms, apparent cause, or class of insanity, and the condition of the disease.

[1] Hawaii Revised Laws, s. 1,112, 1,116.
[2] *Ibid.*, s. 1,113.
[3] *Ibid.*, s. 2,302–2,304, 2,309, 2,322.
[4] *Ibid.*, s. 1,117.
[5] *Ibid.*, s. 2,857, *cf.* s. 2,876.
[6] Code Civil Proc., s. 4,353–4,355, 4,357–4,398.
[7] *Ibid.*, s. 4,356.

3. The nativity, age, residence, occupation, and previous habits of the person.

4. The place from whence the person came and the length of his residence within the State. The judge, after such examination and certificate, if he believes the person so disordered, must make an order confining him in the insane asylum.[1]

The physician attending such examination is allowed five dollars, to be paid by the county treasurer on the order of the board of county commissioners.[2]

The Idaho Insane Asylum is located at Blackfoot, and is under the management and control of a board of directors consisting of three persons, appointed by the governor for two years.

The medical superintendent must be a graduate of medicine and have practised his profession five years after the date of his diploma. He must reside at the asylum and give his entire time and attention to promoting the best interests of the patients. He is the chief executive officer of the asylum, and may control the patients, prescribe the treatment, and prescribe and enforce the sanitary regulations of the asylum.[3]

Any person received in the asylum must after recovery be discharged thereform.

No person laboring under contagious or infectious disease must be admitted into the asylum as a patient, nor a non-resident, unless he became insane within the State.[4]

Contracts.—A person so adjudicated cannot contract, nor delegate any power nor waive any right. A certificate of discharge froman asylum re-establishes the presumption of capacity.[5]

A contract made before adjudication is "subject to rescission," but the person is liable for the reasonable value of necessaries for himself or his family.[6]

Criminal Insane.—When the jury finds the accused "not guilty by reason of insanity," the court may summon a jury to determine if it still continues, and if so found commit him to the State asylum.[7]

Insane persons cannot be tried, sentenced, or punished while in that condition.[8]

[1] Idaho Polit. Code, s. 406–413.
[2] *Ibid.*, s. 418.
[3] *Ibid.*, s. 387–400.
[4] *Ibid.*, s. 401–404.
[5] Civil Code, s. 1,988.
[6] *Ibid.*, s. 1,986–1,987.
[7] Penal Code, s. 5,497, 5,512.
[8] *Ibid.*, s. 5,663–5,666, 5,338.

Illinois.

[The References are to Revised Statutes of Illinois, Hurd, 1905.]

Inquisition as to Lunacy.—When any person is supposed to be insane or distracted, any citizen of the county may petition the judge of the county court for proceedings to inquire into such alleged insanity or distraction.

Upon the filing of such petition, the judge shall order the clerk of the court to issue a writ, directed to the sheriff or any constable or person having the custody or charge of such person, requiring the alleged insane person to be brought before him at a time and place to be appointed. Such officer or person shall bring the alleged insane person before the court. Notice shall be given.

Subpœnas to be issued for such witnesses as may be desired on behalf of the petitioner or of the person alleged to be insane.

Trial to be by a commission of two physicians, or, if demanded or expedient, by a jury of six persons, one of whom to be a physician. The case shall be tried in the presence of the person alleged to be insane, who shall have the right to be assisted by counsel.

Finding of commission or jury to be rendered in writing, signed by them, and to be in the form prescribed by the State Commissioners of Public Charities.

Upon the return of the verdict, it shall be recorded. If it appear that the person is insane and a fit person, the court shall order that the insane person be committed to a hospital for the insane.[1]

Lunatic Asylums.—All persons admitted are supported by the State, so far as treatment and maintenance. At the time of the inquest the county judge shall inquire into the pecuniary condition of the person and his relatives liable to support him. If of sufficient means, private patients at the State hospitals shall pay for their clothing and incidental expenses. Otherwise these shall be paid by their county.[2]

Upon a return of the finding of lunacy by the court to the hospital for the insane to which the person is ordered committed,

[1] Illinois Revised Statutes, c. 85, s. 1–11.

[2] *Ibid.*, s. 15–16.

he shall be admitted, unless impossible for lack of room. Harmless chronic patients may be discharged to make room.[1]

Authority to discharge patients is vested in the trustees, but they may delegate it to the superintendent. Discharges may be for the benefit of the patient, and of incurable cases, and paroles of not exceeding three months may be allowed. Any person confined is entitled to the writ of habeas corpus to determine his sanity. The judge of the county court may hear evidence of restoration at any time. Complete restitution of civil rights shall be given upon discharge.[2]

Voluntary patient in early stages of insanity may be admitted on his application, approved by the county court. He may leave at any time on three days' notice.[3]

Appointment of Conservator.—When any such person is adjudged insane, if it appear that he is the owner or possessor of any property the county court shall appoint some fit person to be the conservator of such insane person; but in case there is a probate court in the county, then he shall transmit thereto a duly certified copy of the record of the verdict of the jury finding such person insane, and upon presentation the probate court may appoint some fit person to be conservator of such insane person.[4]

Whenever any idiot, or insane, distracted, or feeble-minded person has any estate, real or personal, or when any drunkard or spendthrift, gaming, idleness, or debauchery of any kind, so spends, wastes, or lessens his estate as to expose himself or his family to want or suffering, the probate court, or if none, the county court of the county in which such person resides shall, on the application of any reputable citizen living in such county, order a jury to be summoned to ascertain whether such person be an idiot, lunatic, or distracted, a drunkard or such spendthrift, and if the jury so find, the court shall appoint some fit person to be the conservator of such person.

Summons to be issued and served upon person for whom conservator is sought to be appointed.[5]

Powers and Duties of Conservator.—The conservator shall give a bond in double the amount of his ward's real and

[1] Revised Stats., s. 17.
[2] *Ibid.*, s. 22–25.
[3] *Ibid.*, s. 37.
[4] *Ibid.*, s. 12.
[5] *Ibid.*, c. 86, s. 1–2.

personal estate which may be put in suit in the name of the people of the State of Illinois to the use of any person entitled to recover on a breach thereof.

He shall have the care and management of the estate of his ward and the custody of his person until otherwise ordered by the court, and the custody and education of his children where no other guardian is appointed, but shall not deprive the mother of the custody and education of the children without her consent.

He shall take charge of the estate of the ward and within sixty days return to the court a true and perfect inventory of the estate of the ward, signed and verified by him. He shall at the expiration of a year settle his accounts as conservator with the county court.

He shall at the expiration of his trust pay and deliver to those entitled thereto all property in his hands as conservator in such manner as is directed by the court.

On every account or final settlement he shall set forth specifically on what account expenditures were made by him and all sums received and paid out since his last accounting, and show the true balance of money on hand, which account shall be accompanied by the proper vouchers and signed and verified by him.

He shall deliver all accounts of his ward and demand and sue for and receive in his own name as conservator all property of and demands due the ward, and may compromise the same with the approbation of the court.[1]

He shall manage the estate of his ward frugally and without waste and apply the income to the support of his ward and family and the education of his children.

He shall invest the property of his ward in securities approved by the court. He may lease the ward's estate on terms and for a length of time approved by the court. He may, by leave of the court, mortgage the real estate of the ward upon petition to the county court setting forth the condition of the estate and the facts and circumstances, which shall be published in a newspaper in the county for at least once a week for three successive weeks.

The county court may order the real estate of the ward to be

[1] Revised Stats., c. 86, s. 3–11.

sold in the manner and at a time and place prescribed by the court. The conservator making such sale shall make a return thereof to the court; and if the sale be approved by the court, the title shall vest in the purchaser of the estate so sold.[1]

Removal of Conservator.—Conservator may be removed by the county court for failure to give bond, for failure to make inventory, or to account and make a settlement, or when he shall have become insane, or if moved out of the State, or become incapable or unsuitable for the discharge of his duties, or for failure to discharge any duty required of him by law or order of the court.

Before removing the conservator the court shall summon him to show cause.

When it appears proper, the court may permit the conservator to resign if he first settles his accounts and delivers over the estate as the court directs.[2]

Appointment of Successor.—Upon the removal, resignation, or death of the conservator another may be appointed. The court may compel the conservator so removed or resigned or the executor or administrator of a deceased conservator to deliver up to such successor all the property and effects in his custody or control belonging to the ward.[3]

Compensation.—Conservator on settlement shall be allowed such fees and compensation for his services as shall seem reasonable and just to the court.

Restoration to Reason.—When any person for whom a conservator shall have been appointed shall be restored to his reason, or if a drunkard or spendthrift shall have reformed, such person may apply to the county court to have said conservator removed and the care and management of his property restored to him.

Notice of such application shall be given to the conservator ten days before the commencement of the term of the court to which application shall be made. A jury shall be summoned to try the question whether said applicant is a fit person to have the care, custody, and control of his property. If they return that such person is a fit person, then the court shall enter an order fully restoring such person to all the rights and privileges enjoyed before such conservator was appointed.

[1] Revised Stats., s. 17–29.
[2] *Ibid.*, c. 86, s. 32–34.
[3] *Ibid.*, s. 35.

APPEALS.—Appeals shall be allowed to the circuit court from any order or judgment under this act, upon the appellant giving bond directed by the court.[1]

DEFINITIONS.—The word insane as used in the above statutes relating to commitment means any person who by reason of unsoundness of mind is incapable of managing or caring for his own estate, or is dangerous to himself or others, if permitted to go at large, or is a fit subject for treatment in a hospital for the insane. No idiot or simple epileptic shall be regarded as insane, "unless the manifestations of abnormal excitability, violence, or homicidal or suicidal impulses" render confinement proper.[2]

CRIMINAL INSANE.—A lunatic or insane person without lucid intervals shall not be found guilty. In case of acquittal by reason of insanity the jury shall also find whether it continues, and if so found the accused shall be committed to a State hospital.[3]

No insane person shall be tried, or if convicted, sentenced.[4]

INDIANA.

[The references are to Burns's Annotated Indiana Statutes, Revision of 1908.]

DEFINITION.—"Person of unsound mind" in any statute means, "any idiot, *non compos*, lunatic, monomaniac, or distracted person."[5]

CARE AND CUSTODY.—On information of any person the probate court may inquire as to the sanity of an inhabitant of the county, by the court or by a jury. The prosecuting attorney appears for the person.[6]

Personal appearance may be dispensed with for cause.[7]

A guardian may be appointed, and for a non-resident also.[8]

The guardian has the usual powers and duties.[9]

"Every contract, sale, or conveyance" (after such adjudication) "of any person while of unsound mind shall be void."[10]

On complaint that any person is insane and dangerous to the community if at large, a justice of the peace may apprehend the person and try his insanity by a jury of six. If they find him

[1] Revised Stats., s. 37–40.
[2] *Ibid.*, c. 85, s. 1.
[3] *Ibid.*, c. 38, s. 284.
[4] *Ibid.*, c. 38, s. 285.
[5] Indiana Stats., s. 3,100.
[6] *Ibid.*, s. 3,101.
[7] *Ibid.*, s. 3,103.
[8] *Ibid.*, s. 3,102, 3,105.
[9] *Ibid.*, s. 3,107, 252.
[10] *Ibid.*, s. 3,110.

dangerously insane the proceedings are certified to the circuit, which again inquires by a jury of twelve. A guardian of the estate may be appointed, and a person to care for the incompetent shall be appointed, or he may be sent to the hospital for the insane. If the justice's court jury find him sane any person may appeal.[1]

The Central (near Indianapolis), Northern (near Logansport), Southern (near Evansville), Eastern (near Richmond), and Southeastern hospitals for the insane are managed by boards of trustees of four members appointed by the governor.[2]

They appoint a superintendent and other principal officers.[3]

All insane persons residing in Indiana and having a legal settlement in any county "shall be entitled to be maintained and to receive medical treatment" in the State hospitals. But if not adjudged insane, a citizen of the county must make a statement before a justice of the peace showing history, symptoms, etc., and an examination by physicians and an inquiry must be held by the justice.[4]

Preference in admission is given to recent and curable cases.

Idiots are not admitted.[5]

Incurably insane paupers may be cared for in county asylums for the insane in counties having a population of 150,000.[6]

The writ of habeas corpus is available to secure a discharge from detention.[7]

Criminal Insane.—[Convicts becoming insane are sent to the hospital for the insane upon the report of the prison wardens and the finding of a commission, appointed by the Governor—probably obsolete.[8]]

The Indiana Hospital for the Criminal Insane, at Jeffersonville, is governed by the board of managers of the Indiana Reformatory, and the superintendent thereof.[9]

Convicts are sent there after an inquest and examination by physicians appointed by a judge of the circuit court on information of the prison or reformatory physician.[10]

The defence of insanity is set up by a special plea in writing.

[1] Penal Code, s. 7,879–7,887.
[2] *Ibid.*, s. 3,433, 3,434, 3,435, 3,437, 3,682.
[3] *Ibid.*, s. 3,682, 3,688–3,689.
[4] *Ibid.*, s. 3,691–3702.
[5] *Ibid.*, s. 3,703–3,705, 3,731.
[6] *Ibid.*, s. 3,760–3,766.
[7] *Ibid.*, s. 3,729.
[8] *Ibid.*, s. 3,713–3,718.
[9] *Ibid.*, s. 3,741–3,745.
[10] *Ibid.*, s. 3,746–3,759.

If the jury acquit on that ground they must so specify. The person must be proceeded against on this ground as above. The verdict is *prima facie* evidence of his insanity.[1]

When a defendant appearing for judgment is believed to be insane, the question shall be determined by a jury of twelve, and if he is so found, he shall be confined in a State hospital.[2]

IOWA.

[The references are to Code of Iowa, 1897; Supplement, 1907.]

DEFINITION.—The words "insane person" include idiots, lunatics, distracted persons, and persons of unsound mind.[3]

The term "insane," as used in this chapter, includes every species of insanity or mental derangement. The term "idiot" is restricted to persons foolish from birth supposed to be naturally without mind.[4]

GUARDIANS OF DRUNKARDS, SPENDTHRIFTS, AND LUNATICS.—Appointment of guardians vested in the circuit court.

When a petition is presented to the circuit court verified by affidavit that any inhabitant of the county is—

1. An idiot, lunatic, or person of unsound mind;
2. An habitual drunkard, incapable of managing his affairs;
3. A spendthrift who is squandering his property; and the allegations of the petition are satisfactorily proved upon trial, the court may appoint a guardian of the property who shall also be a guardian of the minor children.

Petition to set forth the facts upon which the application is based, to be answered as in ordinary actions. The applicant recorded as plaintiff, the other party as defendant, and either party may demand a trial by jury.[5]

CUSTODY.—Priority of claim to the custody of any such person shall be—1. The legally appointed guardian. 2. The husband or wife. 3. The parents. 4. The children.[6]

POWERS AND DUTIES OF GUARDIANS.—The provisions of this code relating to guardians for minors and regulating or prescribing the powers, duties, or liabilities of each and of the court so far as the same are applicable, shall be held to apply

[1] Penal Code, s. 2,070–2,071.
[2] *Ibid.*, s. 2,177–2,180.
[3] Iowa Code, s. 48, sub. 6.
[4] *Ibid.*, s. 2,298.
[5] *Ibid.*, s. 3,219–3,220.
[6] *Ibid.*, s. 3,228.

to guardians and their wards appointed under the foregoing sections.

Guardian may sue in his own name as guardian of the ward for whom he sues. Action shall not abate upon the termination of his guardianship; but his successor or the person for whom he was guardian shall be made a party to the suit in the same manner as an executor or administrator is made a party to a proceeding of the like kind.

Guardian may sell real estate of the ward for the support of the ward or his family and for the payment of his debts under like proceedings as required by law for the sale of real estate of minors. The court shall, if necessary, set off to the wife and minor children or to either sufficient of the property for their support.

If the estate of any such person is insolvent a like proceeding may be had as is required by law for the settlement of the insolvent estate of a deceased person.[1]

Confinement of Lunatics.—Hospitals are established for the care of the insane at Mt. Pleasant, at Independence, at Clarinda, and at Cherokee, each under the charge and management of five trustees, two of whom may be women.[2]

Commissioners of Insanity.—In each county there is a board of three commissioners of insanity composed of the clerk of the circuit court and two others appointed by the judge of the court, one of whom shall be a physician and the other a lawyer.

Such commissioners have cognizance of all applications for admission to the hospital or for the safe-keeping otherwise of insane persons within their counties. They may issue subpœnas, compel obedience thereto, administer oaths, and do any act of a court necessary and proper in the premises.[3]

Commitment to Hospital by Commissioners.—Application for admission to a hospital must be made by information verified by affidavit alleging that the person in whose behalf the application is made is a fit subject for custody and treatment in the hospital; that such person is a resident of the county or has a local settlement therein if such is known to be the fact, and if such settlement is not in the county where it is, if known.

[1] Iowa Code, s. 3,223–3,227; Supp., s. 3,225.

[2] *Ibid.*, s. 2,254–2,260; Supp., s. 2,253a.

[3] *Ibid.*, 2,261–2,263.

The commissioners shall thereupon examine the informant under oath, and if satisfied that there are reasonable grounds shall at once investigate. They may require the person for whom such admission is sought to be brought before them. They may provide for the suitable custody of such person until the determination of their investigation. They shall hear testimony for and against such application.

Any citizen of the county or relative of the person alleged to be insane may appear and resist the application. The commissioners shall appoint some regular practising physician of the county to make a personal examination of the person alleged to be insane touching the truth of the information and report forthwith to them. Such physician so appointed shall certify that he has made a careful personal examination, that he finds the person in question insane if such is the fact. On the return of the physician's certificate the commissioners shall conclude their investigation and shall find whether the person be insane, and if insane whether he is a fit subject for treatment and custody in the hospital. If they find such person is not insane they shall order his immediate discharge. If found insane, they shall order such person to be committed to the hospital, and shall forthwith issue their warrant and a duplicate thereof stating such finding and authorizing the superintendent of the hospital to receive and keep such person as a patient therein. Such warrant and duplicate with the certificate and finding of the physician shall be delivered to the sheriff of the county, who shall execute the same by conveying such person to the hospital. The superintendent of the hospital shall acknowledge such delivery on the original warrant, which the sheriff shall return to the clerk of the commissioners. No person during such investigation or while being conveyed to the hospital shall be confined in any jail or prison except in cases of extreme violence, when it is deemed absolutely necessary for the safety of such insane persons and of the public that he be confined in such jail or prison; but at no time shall any female be placed in such confinement without at least one female attendant remaining in charge of such insane person.[1]

Appeal from Finding.—Any person found insane by the commissioners of insanity may appeal to the district court

[1] Iowa Code, s. 2,264–2,266.

within ten days after the filing of the finding of such commissioners; the case when thus appealed shall stand for trial anew in such court. Upon appeal it shall be the duty of the county attorney to prosecute the action on behalf of the informant, without additional compensation.

If any person found insane takes an appeal from such finding, such person shall be discharged from custody pending such appeal, unless the commissioners for any reason find that such person cannot with safety be allowed to go at large.

If upon the trial of such an appeal such person is found not insane, the court shall order the immediate discharge of such person if in custody. If found insane, the court shall order such person to be committed to the hospital, and the clerk of the court shall issue a warrant to carry such finding and order into effect.[1]

Custody Outside of Hospital.—If any person found to be insane cannot be at once admitted to a hospital for want of room, or for any other cause, and cannot with safety be allowed to go at liberty, the commissioners shall provide otherwise for the custody of such patient outside of the hospital, until the occasion therefor no longer exists.

Discharge from Hospital.—Upon the application of the relatives or friends of any patient in the hospital who is not cured, and who cannot be safely allowed to go at liberty, the commissioners may provide for the care of such patient within the county.

Whenever it shall be shown to the satisfaction of the commissioners that cause no longer exists for the care within the county of any particular person as an insane patient, they shall order the immediate discharge of such person.[2]

Expenses of Maintenance at Hospital.—The county of settlement of the insane person is liable for the cost and expense of the maintenance of such patient within the hospital. Patients in the hospital having no local settlement within the State, or whose local settlement cannot be ascertained, shall be supported at the expense of the State.

All patients in the hospital shall be regarded as standing upon an equal footing, and the several patients according to their different conditions of mind and body, and their respective needs,

[1] Iowa Code, s. 2,268–2,269; Supp., s. 2,267, 2,270.

[2] *Ibid.*, s. 2,271–2,277.

shall be provided for and treated with equal care; but if the relatives or friends of any patient shall desire and shall pay the expenses therefor, such patient may have special care and may be provided with a special attendant as may be agreed upon with the superintendent. In such case the charges for such special care and attendance shall be paid quarterly in advance.[1]

Discharged When Cured.— Any patient who is cured shall be immediately discharged by the superintendent. Upon such discharge the superintendent shall furnish the patient, unless otherwise supplied, with the suitable clothing, and a sum of money not exceeding twenty dollars, which shall be charged with the other expenses in the hospital to such patient.[2]

Visiting Committee.—The governor shall appoint a visiting committee of three to visit the insane asylums of the State at their discretion, and without giving notice of their intended visit. They may go through the wards unaccompanied by any officer of the institution, may send for persons and papers, and examine witnesses on oath to ascertain whether any of the inmates are improperly detained in the hospital or unjustly placed there, and whether they are kindly treated, with full power to correct any abuses found to exist. They may discharge any attendant or employee who has been guilty of inflicting any injury upon the inmates of the hospital.[3]

Privileges of Inmates.—The names of the visiting committee and their post-office address shall be kept posted in every ward in the asylum, and every inmate in the asylum shall be allowed to write once a week to this committee, and any member of the committee neglecting to heed the call of the patient to him for protection, when proved to have been needed, shall be deemed unfit for his office and shall be removed by the governor.

Every person confined in an insane asylum shall be furnished by the superintendent, or party having charge of such person, at least once in each week, with suitable materials for writing and mailing letters, if they request the same, unless otherwise ordered by the visiting committee, which order shall continue in force until countermanded by said committee.

[1] Iowa Code, s. 2.281, 2,284–2,285; Supp., s. 2,283.
[2] *Ibid.*, s. 2.288.
[3] *Ibid.*, s. 2,299.

The superintendent shall receive, if requested to do so by the person so confined, at least one letter in each week, addressed to one of the visiting committee, without opening or reading the same, and shall without delay deposit it in the post-office for transmittal with the proper postage-stamp affixed thereto; but all other letters may be examined by the superintendent, and if in his opinion it seems proper he may retain the same.[1]

Writ of Habeas Corpus.—All persons confined as insane shall be entitled to the benefit of the writ of habeas corpus, and the question of insanity shall be decided at the hearing, and if the judge shall decide that the person is insane, such decision shall be no bar to the issuing of the writ a second time.[2]

Criminal Insane.—A person acquitted on the ground of insanity may be committed. No person shall while insane be tried or sentenced. An inquest shall be held to determine the sanity of persons convicted of a capital crime. Proceedings may be held before trial or after conviction to determine sanity.[3]

Kansas.

[The references are to General Statutes of Kansas, 1905.]

Care and custody of the person and property of idiots, lunaties, or habitual drunkards is vested in probate court.

Inquisition as to Lunacy.—Based upon information to the probate court that the person is an idiot, lunatic, or person of unsound mind, or habitual drunkard, and incapable of managing his affairs. If satisfied that there is good cause, the court shall cause the facts to be inquired into by a jury.

The court shall cause the person to be given reasonable notice of the hearing.

A jury of six persons shall be empanelled to try the case. Person alleged to be insane may be present at the trial, assisted by counsel, and may challenge jurors. If he has no counsel, the court shall appoint one.

After hearing the evidence jury to render verdict in writing signed by them embodying the substantial facts shown by the evidence in form prescribed by statute. If it be found that the

[1] Iowa Code, s. 2,300–2,302.
[2] *Ibid.*, s. 2,306.
[3] *Ibid.*, s. 5,414, 5,436, 5,437, 5,540–5,544, 4,736–4,738.

person is incapable of managing his affairs a guardian shall be appointed by the court of the person and estate of such person or either.[1]

COSTS.—If the person is found insane or an habitual drunkard, costs are payable out of his estate, or if that be insufficient by the county.

If the person be discharged, costs shall be paid by the person instituting the proceedings.[2]

GUARDIAN.—Guardian of a person of unsound mind or a habitual drunkard shall give a bond approved by the probate court conditioned for the proper care of such insane person or habitual drunkard and the proper management of his estate and effects, and the faithful performance of all matters pertaining to the guardianship.

The court may, at any time, require the guardian to give a new bond or additional security for any purpose.

He shall take charge of the person committed to his charge and provide for his support and maintenance, and take into his possession all the property of the person.

Within thirty days after his appointment, he shall make out and file in the office of the probate court a true inventory of the estate of his ward, containing a statement of the income and proceeds thereof and the debts, credits, and effects. Upon the discovery of any new property, he shall file a like inventory. All such inventories shall be verified and attested by three appraisers.

He shall prosecute and defend all actions in which the ward is interested, shall collect all debts, adjust and settle all demands due or becoming due from his ward.[3]

SALE OF PROPERTY OF WARD.—The property of the ward may be mortgaged, leased, or sold upon the order of the court, for the support and maintenance of the ward's family and the education of his children.

If the personal property of the insane person or habitual drunkard is insufficient for the payment of his debts, the support and maintenance of his family and himself, and the education of his children, the guardian shall petition the probate

[1] Gen. Stat. of Kan., c. 60, s. 1–3, Stats., s. 4,148–4,150.

[2] *Ibid.*, s. 4, Stats., s. 4,151.

[3] *Ibid.*, s. 6–9, Stats., s. 4,153–4,156.

court praying authority to mortgage, lease, or sell such of the real estate as shall be necessary to supply the deficiency.

If it appear to the court that the personal estate is insufficient, the court shall make an order directing such mortgage, lease, or sale. Such order shall contain time and terms of sale, or if the mortgage or lease be ordered the terms of such mortgage or lease, and the manner in which the proceeds shall be secured and the income thereof appropriated.

Such sale shall be upon notice published for four weeks. No real estate shall be sold at private sale for less than three-fourths of its appraised value.

The guardian shall sell at the time and place appointed all such lands at public auction to the highest bidder and shall make a verified report of the proceedings to the court, which report shall also state that the guardian did not directly or indirectly become the purchaser of the property sold and that he was in no wise interested in the purchase thereof. If the court approve the proceedings a deed shall be executed by the guardian to the purchaser.

If the report be disapproved, the court may set aside the sale and order all moneys paid to be refunded.[1]

Restoration of Person to Sanity.—If any person shall allege in writing, verified by oath, that any person declared insane or a habitual drunkard has been restored to his right mind or to temperate habits, the court by which the proceedings were had shall cause the facts to be inquired into either by a jury or without a jury, as may seem proper.

If it shall be found that such person has been restored, the guardian shall be discharged, and he shall immediately settle his accounts and restore to such person all things remaining in his hands belonging to him.[2]

Termination of Guardianship.—In case of the death of any such insane person or habitual drunkard, the power of the guardian shall cease and the estate shall descend and be distributed in the same manner as if such person had been of sound mind and temperate habits, and the guardian shall immediately settle his account and deliver the estate and effects.

Guardian may be removed at any time by the probate court.

[1] Gen. Stat. of Kan., c. 60, s. 10–19, Stats., s. 4,157–4,166.

[2] *Ibid.*, s. 26–27, Stats., s. 4,173–4,174.

When removed, guardian shall immediatcly settle his aecounts and render to his sucecssor the estate and effeets of his ward.[1]

Confinement of Insane Person in the State Insane Asylums.—The insane hospitals are located at Topeka and Osawatomie.

The definition of insane persons is the same as in Illinois. Any probate judge in this State may eommit an insane person to the State insane asylum. The practice is similar to that of Illinois. A jury of four may be demanded.[2]

If the person adjudged insane has sufficient means for his maintenance and that of his family, if he have one, the court shall order his guardian to pay for his maintenance out of the proceeds of the estate of such insanc persou. If the estate be insufficient, the court shall deliver to the board of county commissioners a certificate stating such facts, and thereupon an order shall be issued for the payment of the expenses of such maintenance out of the county treasury.

Private patients may be placed in the asylum at private expense if the superintendent can conveniently receive them. In such cases, the superintendent shall be presented with a certificate, signed by at least one practising physician, and also a certificate of the probate judge of the proper county to the effect that such persons are insane.

The person or eourt placing a patient in the asylum may remove him at any time, and the superintendent may discharge him in accordance with the by-laws of the asylum. No idiot or person laboring under any infectious or contagious disease shall be admitted into the asylum.

When the patient is ordered discharged, the steward of the asylum shall immediately notify the probate judge. In case the patient is discharged not restored, he shall immediately issue his precept to the guardian of such person to remove him from the asylum at the expense of the county or person eharged with his maintenance. If the patient is not removed within thirty days after discharged, the steward shall remove him at the expense of the county or person charged with his maintenance.[3] Discharges are in general regulated as in Illinois.[4]

[1] Gen. Stat. of Kan., s. 28–29, Stats., s. 4,175–4,176,

[2] *Ibid.*, c. 99, s. 493, 495, 497–503, Stats., s. 7,587, 7,589, 7,591–7,597.

[3] *Ibid.*, c. 60, s. 38–43, Stats., s. 4,185–4,190.

[4] *Ibid.*, c. 99, s. 516–518, Stats., s. 7,610–7,612.

Kentucky.

[The references are to Kentucky Statutes, Russell, 1909.]

Custody of Persons and Estates of Idiots and Lunatics.—Jurisdiction vested in circuit and county courts of the persons and estates of idiots, lunatics, or those who from confirmed bodily infirmity are unable to make known to others by speech, sign, or otherwise their thoughts or desires, and, by reason thereof, incompetent to manage their estates, or those whose minds on account of any infirmity or weight of age have become so imbecile or unsound as to render them incompetent to manage their estates.[1]

Sale of Real Estate.—Circuit court, upon the application of the committee, may order the sale of such part of the real estate of an incompetent person as is necessary for the maintenance of such person and his family, and may settle and distribute the estate in the manner provided for the settlement and distribution of the estates of insolvent decedents.[2]

Appointment of Committee.—Committee not to be appointed before the inquest of a jury and the judgment of the circuit or county court declaring the persons insane.[3]

Power of Committee.—Power and duties of a committee are in all respects the same as those of the guardian of an infant, except as to education. But the court may appoint a person other than the committee to take charge of the person, idiot, lunatic, or incompetent person when he is not confined in the asylum.[4]

Claims Against the Estate.—Claims against the estate of a person incompetent to manage his estate shall not be allowed or paid until verified and proved in the manner prescribed for the proof of claims against the estate of deceased persons.[5]

Inquest, How Held.—Inquest to inquire into the question of insanity shall be held only in the circuit court, if one be in session at the time. If no circuit court be in session, the inquest may be held by any judge of a circuit court or by the presiding county judge. No order shall be made sending the person to an asylum unless the jury find that he is so dangerous or

[1] Ken. Stats., s. 4,240.
[2] *Ibid.*, s. 4,241.
[3] *Ibid.*, s. 4,242.
[4] *Ibid.*, s. 4,244.
[5] *Ibid.*, s. 4,245.

uncontrollable that he cannot safely be kept by a committee at home.

No inquest shall be held, unless the person alleged to be of unsound mind is in court and personally in the presence of the jury. Such personal presence shall only be dispensed with upon the oath of two regular practising physicians that they have personally examined the individual charged to be of unsound mind, and that they verily believe him to be an idiot or lunatic or incompetent to manage his affairs, and that his condition is such that it would be unsafe to bring him into court.

The oath prescribed by statute shall be administered to the jury, and the judge shall instruct the jury so as to enable them to decide the question whether the defendant is an idiot or lunatic. The court shall appoint an attorney for him.

If on the return of the verdict the court is satisfied with the inquest, judgment shall be entered according to the finding. If a judge is of the opinion that the verdict is not sustained by evidence, or is against law, he shall set it aside and award a new inquest.

All papers pertaining to the inquest shall be delivered to the clerk of the court and filed by him.

Whenever it shall appear to the county or circuit court, from an affidavit filed, that the insane person has been restored, or that the inquest was false or fraudulent, the facts shall be inquired into by jury in open court and all necessary orders and decrees made by the court. If the lunatic be sent to an asylum, the judge presiding at the inquest shall ascertain and draw up a brief history of the patient's case, embracing certain points, which shall be transmitted with a record of the inquest to the asylum.

Inquests shall be held in the same manner every fifth year before any order shall be granted for the maintenance of an idiot, out of his own estate or from state funds.[1]

Asylum for the Insane.—There shall be for each asylum a medical superintendent, and a first, second, and third assistant physician, and a woman physician, each of whom shall be skilful physicians, and a steward. These officers shall reside in the asylum. They are appointed by the governor, by and with the advice and consent of the senate.

[1] Ken. Stats., s. 4,247–4,252, 4,259.

The medical superintendent shall have the general management, supervision, and control of the patients, subject to the regulation of the board of commissioners, and shall devote his entire time thereto. Mechanical restraint shall not be applied in any case without express direction and under the supervision of one of the physicians in charge of said hospital, nor shall restraining apparatus be kept in the wards when not in use.[1]

The Return of Idiots and Harmless Incurable Lunatics.—All pauper idiots, epileptics, and harmless incurable lunatics shall be returned by the asylum in which they are confined to the several counties from whence they were sent.

The president of the board of commissioners, or the superintendent and one other commissioner, shall act as a commission to pass upon such case as the superintendent may propose to send back. They shall investigate each case carefully, and if all concur that the inmate can be safely sent back, they shall order him returned to the county from whence he was sent.

The cost of returning pay patients shall be paid by their committee or relatives willing and able to pay, and the cost of returning pauper inmates and paying inmates where the money cannot be collected from the committee, shall be paid by the auditor upon the certificate of the superintendent.[2]

Louisiana.

[The references are to Constitution and Revised Laws of Louisiana, Wolff, 1904.]

State Asylum.—The asylum for the insane, located in the town of Jackson, governed by a board of administrators, under the name and style of the "Board of Administrators of the Insane Asylum of the State of Louisiana."[3]

Admission of Lunatics to Asylum.—Whenever it shall be made known to the judge of the district or parish court by the petition or oath of any individual, that any lunatic or insane person within his district ought to be sent to or confined in an insane asylum in this State, such judge shall issue a warrant to bring such lunatic or insane person before him and if after proper inquiry into all the facts and circumstances of the

[1] Ken. Stats., s. 4,213–4,219.
[2] *Ibid.*, s. 4,223–4,224.
[3] Louisiana Statutes, s. 1,760–1,761.

case, he deems it neeessary to eonfine such person in the asylum, he shall make out a warrant to a sheriff of the parish eommanding him to eonvey the lunatie or insane person to the insane asylum.[1]

Examination by Physician of Asylum.—The physician of the asylum shall professionally examine the lunatic or insane person sent to the hospital by the authority of the district or parish judge, and if in his opinion said person is only feigning insanity, being a person eharged with a felonious erime, he shall report to the board, who shall investigate the faet; and if, in the judgment of the majority, said person should not be admitted as an inmate of the asylum, the president of said board shall cause sueh person feigning insanity, and who had been previously committed to prison for a erime, to be eonfined in the parish jail, and shall immediately inform the president of the poliee jury of the parish, or the proper authority in the parish of Orleans where the rejected person has his domicile, of the faet and the reason of his rejeetion. The provisions of this seetion shall also apply to such persons eharged with a erime who afterward reeover and beeome sane in said asylum.[2]

Maine.

[The referenees are to Revised Statutes of Maine, 1903.]

Definition.—The words "insane person" may include an idiot, *non compos*, lunatie, or distraeted person.

Guardians of Insane and Incompetent Persons, Spendthrifts, and Convicts.—The judge of probate may appoint guardians on written applieation of friends, relatives, or creditors, or of the munieipal offieers or overseers of the poor where they reside, for—

1. Persons insane or of unsound mind who, by reason of infirmity or mental ineapacity, are ineompetent to manage their own estates or to proteet their rights.

2. Persons who, by exeessive drinking, gambling, idleness, or debauchery of any kind have beeome ineapable of managing their own affairs or who so spend or waste their estate as to expose themselves or families to want or suffering or their towns to expense.

[1] Louisiana Statutes, s. 1,768.

[2] *Ibid.*, s. 1,776.

Guardians may be appointed for persons committed to either insane hospital without personal notice to the parties, and for insane or incompetent married women after personal notice and a hearing upon proof of the alleged insanity or incompeteney, without inquisition by the municipal officers of the town. In all cases where the municipal officers or overseers of the poor are applicants, if they have given at least fourteen days' notice to such persons by serving him with a copy of their application, the judge may adjudicate thereon, without further inquisition, if such person is present, or on such further notice, if any, as he thinks reasonable.

In all other cases the judge shall hold a hearing upon notice, and he may appoint a guardian.

A copy of the application and the order of the court thereon to be filed in the registry of deeds for the county.

When a guardian is thus appointed, the judge shall make an allowance from the ward's estate for all reasonable expenses of the ward in defending himself against the complaint.

Such guardians have the custody of the person of their ward, except so far as the court of probate may from time to time otherwise order; and every guardian appointed over any person for gambling, idleness, drinking, or debauchery shall inculcate upon him habits of sobriety and industry, and when of sufficient health and strength, with the approbation of the judge, may bind him out to labor, not exceeding six months at any one time, or employ him in his own service.[1]

Powers and Duties of Guardians.—For the bond and the duties of a guardian as to the management of the ward's estate, and the powers of the guardian as to the purchase and sale of property and other matters pertaining to the care and management of the property of the ward, see Maine Stats., c. 69, s. 10–26, relating to the powers, duties, etc., of guardians of minors.

State Insane Hospitals.—The government of the hospitals at Augusta and Bangor is vested in a committee of seven trustees, one of whom shall be a woman. Trustees may appoint a superintendent and a steward and treasurer subject to the approval of the governor and council, and all other officers necessary for the efficient and economic management of the business of the institution.

[1] Maine Stats., c. 69, s. 4–9.

There shall be, monthly by two of the trustees, quarterly by three, and annually by a majority of the full board, a thorough examination of the hospital. At each visit a written account of the state of the institution shall be drawn up by the visitors, recorded and presented at the annual meeting of the trustees, at which meeting they with the superintendent shall make a particular examination into the condition of each patient, and discharge any one so far restored that his comfort and safety and that of the public no longer requires his confinement.[1]

Duties of Superintendent.—The superintendent shall be a physician, reside constantly at the hospital, have general superintendence of the hospital and grounds, receive all patients legally sent to the hospital, unless the number exceeds its accommodations, and have charge of them and the direction of all persons therein, subject to the regulation of the board of trustees.

He shall apportion the number of patients who can be accommodated in the hospital among the towns according to their population by the last census; and when applications for admission exceed, or are liable to exceed, that number of patients, he shall give preference to those from towns that have not their full proportion of patients in the hospital, and may reject others.

When a person has been unlawfully committed, the superintendent shall report the case to the trustees at their next monthly meeting, and they may cause the removal of such person to the town from which he was committed. The superintendent at each monthly visit of the trustees shall also report to them the name of any inmate who was idiotic at the date of his commitment, or who has become so imbecile as in his judgment to be beyond cure; and if he thinks that such inmate may be discharged with safety to himself and to the public, the trustees shall order his discharge and cause him to be removed to the town from which he was committed.[2]

Commitments.—Parents and guardians of insane minors if of sufficient ability to support them at a State hospital, shall send them there or to some other hospital without legal examination, within thirty days from the attack.[3]

As to other insane persons, the municipal officers of towns,

[1] Maine Stats., c. 144, s. 1–7.
[2] *Ibid.*, s. 8–14.
[3] *Ibid.*, s. 15.

constituting a board of examiners, shall, on written complaint of any blood relative, husband or wife or justice of the peace, inquire into the person's condition. Notice shall be given him, and a hearing had. If the board think him insane and that his comfort and safety or that of others interested will be promoted by commitment, they may send him to either of the State hospitals.[1]

The evidence of two physicians and their certificate are required.[2]

The indigent insane are partly maintained by the State.[3]

If the municipal officers refuse to act the complaint may be made to two justices of the peace.[4]

On application of a friend, person, or town liable for the support of a patient who has been confined six months, any person not afflicted with homicidal insanity or committed by the supreme court may be ordered discharged by the board of examiners.[5]

When the overseers of the town are notified by mail by the superintendent that a person supported by the town has recovered, they shall cause him to be removed to their town.[6]

Criminal Insane.—When the plea of insanity is made or is to be made, a justice of the court before whom the prisoner is to be tried shall order such person into the care of the superintendent of either insane hospital, to be detained and observed by him until further order of the court, that the truth or falsity of the plea may be ascertained.[7]

When the grand jury fails to indict, or the trial jury acquits an accused because of insanity, they shall state that fact, and the court may commit him to the insane department of the State prison or to either hospital. He shall be discharged only on proof that his discharge will not endanger the community, and may be recommitted by the supreme court if again found insane and dangerous. His support is at his own expense, if he has means, otherwise at the expense of the State.[8]

The governor appoints in each county a physician to act as examiner of insane convicts in the county jail. On his recommendation the governor and council may remove insane convicts to the insane department of the State prison or to either State

[1] Maine Stats., c. 144, s. 16.
[2] *Ibid.*, s. 17.
[3] *Ibid.*, s. 18, 22–25.
[4] *Ibid.*, s. 19–21.
[5] *Ibid.*, s. 26.
[6] *Ibid.*, s. 27.
[7] *Ibid.*, c. 138, s. 1.
[8] *Ibid.*, s. 2–4.

hospital. Persons insane when convicted may be sentenced to the insane department of the State prison, if the crime is punishable by confinement there; otherwise to a State hospital.[1]

After the expiration of a term of sentence, an insane convict may be removed to a State hospital.[2]

MARYLAND.

[The references are to Public General Laws of Maryland, Poe, 1903.]

JURISDICTION OF COURTS OF EQUITY.—Courts of equity have power to superintend and direct the affairs of persons *non compos mentis* both as to the care of their persons and the management of their estates; and may appoint a committee or trustee for such persons and make such orders and decrees respecting their persons and estates as to the court may seem proper.[3]

SALE OF PROPERTY OF NON COMPOS MENTIS.—Property may be sold on application of any creditor if the court is satisfied of the justice of the claim and there is no other means of paying the claim. The court may upon the application of the guardian decree without any process or order of publication the sale of property and order the money arising therefrom to be invested as the court may deem most advantageous. On the death of such *non compos mentis* the principal sums arising from such sale shall descend to the persons to whom the property would have descended if the same had not been sold.

The court may likewise order real or leasehold property to be leased for any term of years, or may order the surrender of any lease.

In all applications to sell the real or personal property of such person, if the court shall after taking proof deem it for the interest and advantage of such person, it may decree a sale, lease, or surrender of such property on such terms and conditions as the court may prescribe.

No sale, lease, or surrender shall be valid unless reported to and confirmed by the court.[4]

The court may allow to the committee or other person

[1] Maine Stats., c. 138, s. 5, 7.
[2] *Ibid.*, s. 6, 8.
[3] Maryland Code, art. 16, s. 107.
[4] *Ibid.*, s. 108–112.

charged with the care of the person or estate of any *non compos mentis*, a sum not exceeding ten per cent of the income or expenditures for the care and trouble of such trustee or person. The court may decree that the property of such *non compos mentis* be sold for his support, or for the payment of expenses which the trustee may have incurred.[1]

Confinement of Non Compos Mentis.—The court may on the application of any trustee, and upon receiving proof that it is necessary and proper to confine such person, direct such trustee to send the person under his charge to any hospital in the vicinity of the city of Baltimore, provided he can be there received, to remain until a further order of the court.[2]

Discharge.—On petition of the person to have the commission superseded on the ground of recovery, a jury trial shall be had.[3]

Inquisition as to Insane Pauper.—The county commissioners or the department of charities of Baltimore upon the written certificate of two physicians, may cause an insane pauper to be sent to the almshouse, or to a hospital. A county circuit court or the criminal court of Baltimore, when any person is alleged to be a lunatic or insane pauper, shall (when the same is demanded by the alleged lunatic or any of his relatives or friends, or upon the notification of the said commissioners or board to the State's attorney, that they are not satisfied that the person is insane) cause a jury of twelve men to be empanelled and charge the jury to inquire as to the sanity of such person, and if found insane the court shall cause such person to be sent to the almshouse of the county or city to which he belongs, or to some other place best suited in the judgment of the court to his condition, there to be confined at the expense of the county or city until he shall have recovered and be discharged.[4]

Confinement of Lunatic Pauper.—The county commissioners of any county may remove from the almshouse any lunatic pauper and cause him to be sent to the Maryland hospital, and levy on the county the sum necessary to defray the expenses incidental to the removal of such lunatic and his maintenance in such hospital. Such expenses in no case to exceed the sum of one hundred and fifty dollars per annum.[5]

[1] Maryland Code, art. 16, s. 113–114.
[2] *Ibid.*, s. 115.
[3] *Ibid.*, s. 116.
[4] *Ibid.*, art. 59, s. 1.
[5] *Ibid.*, s. 2.

WHO DEEMED A LUNATIC PAUPER.—No person shall be deemed a lunatic pauper who shall possess in his own right any property, real or personal, or be entitled to the use of any property by last will and testament, or deed of trust for his use or benefit.[1]

LUNACY COMMISSION.—A lunacy commission has supervision over all institutions in which insane persons are detained.[2]

If, in their judgment, any person confined in any institution as insane be not insane, the commission may bring the matter to the attention of the State's attorney of any county, whose duty it shall be to apply to the proper tribunal for a writ of habeas corpus, to the end that proper inquiry and investigation may be had at once as to the mental condition of such person, and if the court shall be of the opinion that such person is not insane then the court shall discharge such person, but if the court determines that such person is insane he shall be returned to the institution.

Free access to all institutions shall be granted to the members of said commission, or their secretary, and the officers of such institutions shall furnish upon request all necessary information. The lunacy commission may issue compulsory process for the attendance of witnesses, administer oaths, and examine persons under oath. The managers of any such institutions shall have the right to appeal from the determination or action of said commission.[3]

No asylum for the care or custody of the insane to be kept without a license from said commission.[4]

No person shall be committed to or confined as a patient in any institution, or almshouse, or other place for the care and custody of the insane or idiotic, except upon the written certificate of two qualified physicians, made within one week after separate examination by them of the alleged lunatic. No physician connected with any institution shall certify to the insanity of any person for the purpose of committing such person to such institution.[5]

Persons confined in such places to be furnished with writing material, and may correspond with some person chosen by themselves without restriction.[6]

[1] Maryland Code, art. 59, s. 3.
[2] *Ibid.*, s. 12.
[3] *Ibid.*, s. 20–27.
[4] *Ibid.*, s. 28.
[5] *Ibid.*, s. 31–32.
[6] *Ibid.*, s. 35–36.

Any person may voluntarily commit himself to an asylum for a period not exceeding three months. If at the end of that time he is unfit to be discharged, the lunacy commission shall be notified and shall examine the case, and may authorize further treatment.[1]

CRIMINAL INSANE.—When insanity is interposed as a defense the trial jury shall ascertain also whether the accused still is insane. If so found he may be committed. The insanity of accused persons is tried by a special jury of twelve. If committed and he has an estate, it may be applied to his support.[2]

MASSACHUSETTS.

[The references are to Revised Laws of Massachusetts, 1902, Supplement, 1906.]

Jurisdiction over the person and estate of insane person vested in the Probate Court.

DEFINITION.—The words "insane person" and "lunatic" shall include every idiot, *non compos*, lunatic, and insane and distracted person.[3]

GUARDIANS.—The probate court may appoint a guardian of the person and estate of an insane person or one incompetent by reason of advanced age or mental weakness, upon the application of the relatives or friends, or the mayor and aldermen or selectmen of the city or town, upon fourteen days' notice of the time and place appointed for the hearing, to be given to the alleged insane person.

Guardians of spendthrifts and habitual drunkards may be appointed in the same way and upon the same notice by probate courts.

The guardian of an insane person or spendthrift shall have the care and custody of the person of his ward, and the management of all his estate; shall give a bond in the manner prescribed for guardians of minors.

A guardian may be discharged by the probate court on the application of the ward or otherwise, when it appears that the guardianship is no longer necessary.[4]

[1] Maryland Code, art. 59, s. 37.
[2] *Ibid.*, s. 4–9.
[3] Mass. Rev. Laws, c. 8, s. 5, subd. 6.
[4] *Ibid.*, c. 145, s. 6–11, 40 (as amended, Supp. p. 780).

Powers and Duties of Guardians.—Powers and duties of guardians for insane persons and habitual drunkards are the same as those prescribed for the guardians of minors.[1]

Commitment of Insane Person.—Either judge of probate for Suffolk County, the judge of probate for Nantucket County, or a justice of a police, district, or municipal court, except the municipal court of Boston, may commit any insane person to either of the State lunatic hospitals.

No person to be committed without a certificate of two physicians and an order signed by one of the judges. Such order or certificate to state that the person is insane and is a fit person for treatment. The judge shall see and examine the person alleged to be insane, or state in his final order why it was not deemed necessary or advisable to do so. The physicians examining must make oath that they are graduates, etc. They must not be connected with any hospital or establishment for the treatment of the insane to which the person may be committed. Each must personally examine the person alleged to be insane within five days of signing the certificate, and each shall certify that in his opinion the person is insane and a proper subject for treatment. A copy of the certificate attested by the judge shall be delivered by the officer making the commitment to the superintendent of the hospital where the person is committed.[2]

Application for commitment of insane person to be accompanied by a statement containing facts as to the condition of the person alleged to be insane. Relatives and two friends to be notified of commitment.[3]

The judge upon hearing the evidence may issue his warrant for the apprehension and bringing before him of the alleged lunatic, if, in his judgment, the condition or conduct of such person renders it necessary or proper to do so.[4]

Inquisition.—The judge may summon a jury of six lawful men to hear and determine whether the alleged lunatic is insane.

The jury shall be selected as the judge shall direct.

The judge shall preside at such trial, and administer to the jury an oath faithfully and impartially to try the issue, and the verdict of the jury shall be final on the complaint.[5]

[1] Mass. Rev. Laws, c. 145, s. 25–27, 29–31.

[2] *Ibid.*, c. 87, s. 33–35. As to necessity of notice, see Dowdell, Petitioner, 169 Mass., 387.

[3] *Ibid.*, s. 39.

[4] *Ibid.*, s. 41.

[5] *Ibid.*, s. 42–47.

STATE BOARD OF INSANITY.—Consists of five persons, at least two experts in insanity, appointed by the governor. The board shall appoint an executive officer, agents, etc., who may execute its powers. It shall make an annual report to the governor and council. The board shall encourage and publish the results of scientific investigations by the hospital staffs. It has general supervision of the State colony for the insane, the State hospitals and asylums for the insane, and all private institutions, the Massachusetts Hospital for Epileptics, the hospital for dipsomaniacs and inebriates (Foxborough State Hospital), the Massachusetts school for the feeble-minded, and the hospital cottages for children. It shall have power to investigate the condition of all persons in the State who are in custody as insane.

The State has the care, control, and treatment of all insane persons; except that the city of Boston may establish an asylum.[1]

STATE COLONY FOR THE INSANE AND STATE HOSPITALS.—The colony occupies a tract of land in the towns of Westminster and Gardner. The hospitals are the Worcester, Taunton, Danvers, and Westborough Insane Hospitals, the Northampton State Hospital, the Foxborough State Hospital (for dipsomaniacs and inebriates), the Medfield Insane Asylum, and the Massachusetts Hospital for Epileptics. They are governed by boards of trustees, consisting of seven members, five men, and (except in the case of Foxborough State Hospital) two women. The trustees appoint a superintendent, assistant physicians, and a treasurer.

The State is divided into districts, from which the insane are committed to the specified hospital.

Voluntary patients may be received at any hospital for the insane, and may leave at will.[2]

CARE OF CHRONIC INSANE IN PRIVATE FAMILIES.—The chronic insane of a quiet class may be boarded in families, if deemed expedient, by the State Board of Insanity. The cost of boarding such insane person shall be paid from the appropriation for the support of State paupers in lunatic hospitals; but the rate paid shall not exceed $3.25 a week. It shall be the duty of the board to visit by an agent at least once in three months all such insane persons boarded in families at the expense of the

[1] Mass. Rev. Laws, c. 87, s. 1–12. [2] *Ibid.*, Supp., s. 13–32, 53–54.

State; and all insane persons boarded at the expense of other institutions, at least once in six months.[1]

COMMITMENT OF HABITUAL DRUNKARDS OR DIPSOMANIACS TO STATE LUNATIC HOSPITALS.—Person suffering from dipsomania or habitual drunkenness may be committed to the State Foxborough Hospital upon satisfactory evidence furnished to the judge before whom the proceedings for commitment are had, that such person is not of bad repute or of bad character apart from his habits of inebriety. Laws relative to persons committed on the ground of insanity apply to persons committed under the provisions of this act. They may be detained for two years. Voluntary patients are admitted and may depart at will.[2]

DISCHARGE OF INMATES OF HOSPITALS.—Two of the trustees of any of the State lunatic hospitals or a justice of the supreme judicial court, or a judge of probate, or, in the case of hospitals other than insane hospitals, the State Board of Insanity, may discharge there from any inmate there of committed as an insane person, upon such notice as they may deem proper. The superintendents may be given like authority by the trustees.

Said superintendent may, when advisable, permit any such inmate to leave the hospital for a period not exceeding six months and receive him when returned without any further order of commitment.[3]

COUNTY RECEPTACLES.—In each county a place shall be provided, within the precincts of the house of correction, for the confinement of insane persons not furiously mad.[4]

PRIVATE ASYLUMS.—Must be licensed by the Board.[5]

CRIMINAL INSANE.—Persons under indictment, found by the court to be insane, and to require observation, or under imprisonment and becoming insane, may be removed to a State hospital. If a person is acquitted by reason of insanity, the jury shall so state, and if the court is satisfied that he is insane he may be committed. In the case of a person indicted for murder or manslaughter so acquitted he shall be committed for life, but the governor, the council consenting, may discharge him. Vicious persons of the above classes may be committed or transferred by the court to the State asylum for insane criminals.[6]

[1] Mass. Rev. Laws and Supp., c. 87, s. 102–105.
[2] *Ibid.*, s. 59–65a.
[3] *Ibid.*, s. 91–95.
[4] *Ibid.*, s. 106–108.
[5] *Ibid.*, s. 111–112.
[6] *Ibid.*, c. 219, s. 11–12, 15–17, c. 220, s. 41–42, c. 225, s. 101–102.

MARRIAGE.—An insane person or an idiot shall not be capable of contracting marriage; the validity of a marriage shall not be questioned by reason of idiocy or insanity collaterally, but only in a process instituted in the lifetime of both parties to test such validity.[1]

MICHIGAN.

[The references are to Compiled Laws of Michigan, 1897.]

The words "insane person" shall be construed to include an idiot, a *non compos*, lunatic, and distracted person. As used in the act relating to commitments, they include every species of derangement, except idiocy.[2]

GUARDIAN.—The judge of probate may appoint a guardian for an insane person or any person mentally incompetent to have the charge and management of his property, upon the application of relatives or friends of such person, or if such person is a county charge, upon the application of the directors of the poor. Notice shall be given such person not less than fourteen days before the time appointed for the hearing.

If the judge finds that the person in question is incapable of taking care of himself and managing his property, he shall appoint a guardian. Pending the application for the appointment of a general guardian, a special guardian may be appointed who shall hold office until the question of appointment of a general guardian be decided, or until he shall be discharged by the judge of probate.[3]

POWERS AND DUTIES OF GUARDIAN.—Such guardian shall have the care and custody of the person and management of the estate of the ward. He shall give a bond to the judge of probate in the manner and form prescribed for the guardian of a minor.[4]

GUARDIAN FOR SPENDTHRIFT.—When any person, by excessive drinking, gaming, idleness, or debauchery of any kind, shall so waste his estate as to expose himself or his family to want or suffering or the county to charge or expense, any superintendent of the poor of the county, or director of the poor, or a justice of the peace in which such spendthrift resides,

[1] Mass. Rev. Laws and Supp., c. 151, s. 5.

[2] Michigan Comp. Laws, s. 50, subd. 7, p. 163; s. 1,940, p. 670.

[3] *Ibid.*, s. 8,709, 8,710, p. 2,683.

[4] *Ibid.*, s. 8,711, p. 2,684.

may present a complaint to the judge of probate setting forth the facts and circumstances of the case, and praying for the appointment of a guardian.

Notice shall be given to such supposed spendthrift of the time and place of hearing, not less than fourteen days before the time appointed; but if, after a full hearing, it appears to the court that the facts of the complaint are true, he shall appoint a guardian of his person and estate.[1]

Powers and Duties of Guardian of Spendthrift.—Such guardian shall have the care and custody of the person and the management of the estate of the ward, and shall give a bond in the manner prescribed in respect to the guardian of an insane person.[2]

In General.—Every guardian whether of an insane person or a spendthrift shall be under the direction and control of the probate court and shall have the same powers as to the estate of the ward as the guardian of a minor.[3]

As to the appointment of guardians for drunkards and intemperate persons, it is prescribed that the guardian may be appointed for such a person upon the petition of the husband or wife, or some relative by blood, of the person for whom the guardian is asked.

In such proceedings, the probate judge may take the testimony of witnesses and examine the respondent, and shall determine whether such guardian should be appointed.[4]

Confinement of the Insane.—When a person in indigent circumstances, and not a pauper, becomes insane, an application may be made to the judge of probate of the county where he resides, and the judge shall immediately notify such alleged insane person of the time and place of hearing. He shall call two legally qualified physicians and other credible witnesses, whose duty it shall be to attend and act in such case. Such judge shall fully investigate the facts, and, either with or without the verdict of the jury, determine the question of insanity and the question of his indigence. If the judge certifies that such person is in indigent circumstances and his estate is insufficient to support him and his family, he shall be admitted

[1] Michigan Comp. Laws, s. 8,712, 8,713, p. 2,684.
[2] *Ibid.*, s. 8,711, p. 2,684.
[3] *Ibid.*, s. 8,717, 8,735, p. 2,685–2,688.
[4] *Ibid.*, s. 8,739–8,743, p. 2,689–2.690.

into the asylum and supported there at the expense of the county to which he belongs, or if he has no legal settlement, at the expense of the State. Relatives liable to support him may be compelled to do so.

If an insane person in indigent circumstances shall have been maintained by his friends in the asylum as a private patient for three months, and the superintendent shall certify that he is insane and requires further treatment, the judge may without further evidence of the insanity, and if the indigence be established, make a certificate authorizing the admission of said patient into the asylum as a county charge or State charge as provided above.[1]

Qualifications of Physicians Certifying to Insanity.—Physician must be of reputable character, a graduate of some incorporated medical college, a permanent resident of the State, not related to the alleged insane person nor to the person applying for the certificate, and shall have been in the actual practice of his profession for at least three years.[2]

Admission of Private Patients to Asylums.—No private patient shall be admitted to any insane asylum except upon the certificate of two reputable physicians under oath, appointed by the judge of probate of the county where such person resides, to conduct an examination, and upon an order from said judge, setting forth that such person is insane and directing his removal to an asylum or institution for the care of the insane.[3]

Inquest.—The judge may institute an inquest and take proofs as to the alleged insanity before granting such order. He may in his discretion or on the demand of the person call a jury of twelve persons to determine the question of sanity. If satisfactory evidence is adduced showing the alleged insane person to be of unsound mind, he shall grant an order for the removal of such insane person to such institution, there to be supported as a private patient.[4]

Proceedings for the Commitment of Pauper Insane.—If any person being a pauper shall become insane, the county superintendent of the poor or any supervisor of any city or town

[1] Michigan Comp. Laws, s. 1,915–1,917, p. 661–662.
[2] *Ibid.*, s. 1,914, p. 657.
[3] *Ibid.*, s. 1,913, p. 655.
[4] *Ibid.*, s. 1,913.

may make application to the probate judge, who shall proceed to inquire into the question of the insanity of said person.

He may call upon and compel the attendance of one or more legally qualified physicians and such other witnesses as he may deem necessary, and if satisfied of the insanity of such person he shall make the same certificate and order for admission into the insane asylum as is provided in the case of persons in indigent circumstances.[1]

MAINTENANCE OF INSANE.—The cost of the maintenance in the asylum of any indigent or pauper patient, received upon the order of any court or officer, shall be paid by the county from which he was sent to the asylum, except of those termed "State patients."[2]

MINNESOTA.

[The references are to Revised Laws of Minnesota, 1905.]

COMMITMENT OF INSANE PERSONS.—Warrant may issue from the probate judge or court commissioner of any county, upon sworn information showing that there is an insane person in the county needing care and treatment, and that it is dangerous for him to be at large, to apprehend such person.

Upon the filing of such information, the court shall make an order directed to two reputable persons, one at least of whom shall be a duly qualified physician, and such persons with the judge shall constitute a jury to examine the person alleged to be insane, and they shall ascertain the fact of sanity or insanity.

Each of such persons shall be sworn to examine the patient impartially and to the best of his ability. The probate court may summon such witnesses as are necessary. The county attorney shall have notice and appear for the accused.

Certain questions which are prescribed by statute shall be asked in the examination.

Upon the completion of such examination, the jury shall report their findings in writing. Such findings shall be that the person is sane, or insane, and a fit subject for hospital treatment.

If such person is found to be insane, he may be committed by order of the judge to one of the hospitals for the insane, public or private.

[1] Michigan Comp. Laws, s. 1,919, p. 663.

[2] *Ibid.*, s. 1,921, p. 663–664.

If the person committed is a female, she shall be accompanied to the hospital by a woman or by her husband.[1]

GUARDIANS OF INCOMPETENTS.—The probate court may appoint a guardian or guardians of any person who, by reason of old age or loss or imperfection of mental faculties, is incompetent to have the charge or management of his property, or a person who, by excessive drinking, gaming, idleness, or debauchery, so spends or wastes his estate as to be likely to expose himself or his family to want or suffering, either upon the application of the county commissioners of the county where such person resides or upon the petition of any relative or friend of such person; which petition shall set forth the facts and be verified by the affidavit of the petitioner to the effect that he believes the facts as so stated are true. Upon the presentation of the application, the probate court shall fix a time for a hearing and shall cause a notice to be given to the person proposed to be put under guardianship, at least fourteen days prior to the time fixed for the hearing.

All competent evidence shall be considered at the hearing, and if it appear that the person is such an incompetent, the court shall appoint a guardian or two guardians of his person and estate.

POWERS AND DUTIES OF GUARDIAN.—Every guardian so appointed shall have the care and custody of the person of his ward and the management of all his estate until such guardian is discharged. The provisions relating to the bond of guardians of minors as prescribed in section 3,833, apply to guardians of incompetents.[2]

RESTORATION TO CAPACITY.—The fact of the restoration of an incompetent person shall be judicially determined upon the application of such insane person or his guardian, relative, or friend.

Notice shall be given of a hearing to the guardian of the person. On the hearing the guardian, relative, or friend may contest the right to the relief demanded. Witnesses may be summoned and examined by the court of its own motion. If

[1] Minnesota Stats., s. 3,851–3,860, as amended chap. 119, Gen. Laws of 1895, and chaps. 47, 85, 341, Gen. Laws of 1905, to meet objections to constitutionality raised in State ex rel. Blaisdell v. Billings, 57 N.W., 794; 55 Minn., 467.

[2] Minn. Stats., s. 3,826–3,830, 3,833, 3,841.

it be found that the person be of sound mind and capable of taking care of himself and property, his restoration to capacity shall be adjudged and the guardianship shall cease.[1]

HOSPITALS FOR THE INSANE AND COMMITMENT THERETO. —"Insane" is defined as including every species of insanity except idiocy or imbecility.[2] The three State hospitals (one homeopathic) and two State asylums are under the charge of a State Board of Control and Charities composed of three members appointed by the governor, by and with the advice and consent of the senate.

The Board has the general control of the State institutions and may make all by-laws necessary for the government of the same, appoint for each hospital a medical superintendent, fix all salaries not otherwise determined by law, and remove all officers appointed by them, except the superintendent, who shall only be removed for good cause shown.

He shall give immediate notice to the next of kin of each patient under his charge of the death, serious illness, or any special change in the condition of such patient, and answer promptly and fully all letters of inquiry received from the relative of any patient in said hospital.[3]

ADMISSION TO HOSPITAL.—Only insane persons, legal residents of the State, recommended for commitment as prescribed by law may be admitted and maintained at one of the State hospitals at public expense.[4]

ARRESTS OF INSANE PERSONS.—No alleged insane person shall be arrested except to prevent his doing harm and until an adjudication may be obtained.[5]

PRIVILEGES OF INSANE IN HOSPITAL.—Every inmate committed to any hospital for the insane, upon entering the institution, may choose as a correspondent an individual not connected with the institution, with whom he shall be allowed to communicate freely without censorship. Each inmate may choose a new correspondent every three months. The superintendent shall keep registered and posted in some public place at the institution the name and post-office address of each correspondent and the name of the inmate choosing such correspondent. When

[1] Minn. Stats., s. 3,831.
[2] *Ibid.*, s. 3,851, 5,514 (7).
[3] *Ibid.*, s. 1,861, 1,915–1,926, 1,865, 1,866, 1,871.
[4] *Ibid.*, s. 1,898.
[5] *Ibid.*, s. 4,906 (6), 4,941.

any person is chosen as a correspondent, the superintendent shall notify him within three days that he has been chosen and inquire whether he will act. Each inmate of any hospital may communicate in writing with the governor and the board of control, in the same manner as with the correspondent. Every violation of the above shall be a misdemeanor.[1]

CRIMINAL INSANE.—The provisions as to responsibility are substantially the same as in the New York Penal Code.[2]

Persons accused or convicted of crime and found insane may be committed by the judge.[3]

MISSISSIPPI.

[The references are to Mississippi Code of 1906.]

WRIT DE LUNATICO INQUIRENDO.—The chancery courts have jurisdiction of writs of lunacy, to be exercised by the clerks at any time subject to the approval of the court. Any relative of a lunatic or insane person may procure him to be so adjudged. If the relatives or friends of any insane person allow him to go at large, the clerk of the chancery court may, upon application of any citizen, direct the sheriff by writ of lunacy to summon the alleged lunatic or insane person to contest the application, and six freeholders to make inquiry thereof. If the person shall be adjudged insane by the jury, the clerk shall direct the sheriff by writ to arrest him and place him in one of the asylums, if there be a vacancy, and if not to confine him in the county jail until there be room in the asylum.

If the person be adjudged harmless and indigent and not in need of special treatment, he shall be sent to the poorhouse.[4]

ADMISSION INTO ASYLUMS.—The superintendent of each asylum shall admit and receive therein all persons ordered to be confined therein in the order of application, if there be a vacancy in the asylum. The expenses of the inquiry and of the removal to and from the asylum shall be borne by the estate of the lunatic, if he have any, and if not by the person required by the pauper laws to support him—but in the first instance the expenses are to be paid by the county.[5]

LUNATIC ASYLUMS.—The control and management of the

[1] Minn. Stats., s. 1,918–1,919.
[2] *Ibid.*, s. 4,754–4,756.
[3] *Ibid.*, s. 5,375–5,376.
[4] Miss. Code, s. 532, 3,219–3,221; held constitutional, Fant v. Buchanan, 17 So., 371.
[5] *Ibid.*, s. 3,222–3,224.

asylums for the insane is vested in a board of five trustees appointed by the governor, with the advice and consent of the senate, who have charge of the interests of the asylum, and manage and direct its affairs, and make all proper by-laws and regulations for its control and government. The trustees are required to make regular and frequent inspection of the asylum, for which purpose one or more of them shall visit the asylums at least once in every month. Superintendents of the asylums are appointed by the governor, and are required to be skilful physicians. The superintendent has the supervision of the buildings, with their furniture, fixtures, and stock, and the direction and control of all persons and officers therein. The white and colored races are kept separate in the asylums.[1]

GUARDIANS.—The chancery court may appoint guardians of persons adjudged, upon inquisition, to be of unsound mind, upon its own motion or on the application of a relative or friend or of a member of the board of supervisors. If the person has not been adjudged insane, the writ de lunatico inquirendo shall issue upon any such application, and if upon such inquisition the person be adjudged of unsound mind and incapable of taking care of himself or property, the court may appoint a guardian. The chancery court may also appoint guardians for drunkards and opium-eaters on the application of a relative or friend. In such case the court shall examine the question and determine whether the person be an habitual drunkard or opium- or morphine-eater, and for that purpose may summon and hear witnesses and hear the parties and their evidence, and if the court be satisfied that the person is an habitual drunkard, opium- or morphine-eater, it shall appoint a guardian of his person and estate. The court of chancery may direct the confinement of any person adjudged an habitual drunkard or an habitual opium- or morphine-eater in an asylum.

POWERS AND DUTIES OF GUARDIANS.—Guardians shall make an inventory of the estate and account with the court as often and in the same manner as guardians of minors are required to return inventories and account. Guardians shall improve the estate committed to their charge and apply so much of the income as may be necessary to the comfortable maintenance and support of the ward and his household or family, sue for

[1] Miss. Code, s. 3,187–3,197, 3,211–3,217.

and collect debts due the ward, and on order of the court may sell the real estate to pay indebtedness.[1]

CRIMINAL INSANE.—Persons charged with crime and not prosecuted on account of present insanity must be reported to the chancery court in order that an inquisition may be held; but persons acquitted of crime on the ground of insanity and certified by the jury to be still insane and dangerous shall be forthwith committed to a State asylum.[2]

MISSOURI.

[The references are to Missouri Annotated Statutes, 1906.]

INQUIRY AS TO INSANITY.—If information in writing be given to the probate court that any person in its county is an idiot, lunatic, or a person of unsound mind and incapable of managing his affairs, and praying that an inquiry thereinto be had, the court, if satisfied that there is good cause for the exercise of its jurisdiction, shall cause the facts to be inquired into by a jury. Provided, that the probate court shall not have jurisdiction to inquire into the insanity of any person who is the owner of no property. The alleged insane person must be notified of the proceeding unless such person is ordered to be brought before the court, or notice is dispensed with for cause spread on the record. Any judge of the county court, or justice of the peace, sheriff, coroner, or constable may make application to the probate court for the exercise of its jurisdiction.[3]

APPOINTMENT OF GUARDIAN.—If the person be found by the jury of unsound mind and incapable of managing his affairs the court shall appoint a guardian of his person and estate. If the lunatic be a public officer his office shall be deemed vacant. Every guardian so appointed is required to give a bond for the due and proper care of such person and the management of his estate to the best advantage. The court may provide for the restraint and keeping of the ward and family.

Every such guardian shall take charge of the person and provide for his support and maintenance. He shall collect and take into his possession all the personal property and within sixty days after his appointment file a just and true inventory of the real and personal estate of his ward. An additional in-

[1] Miss. Code, s. 2,430–2,438.
[2] *Ibid.*, s. 1,538–1,540.
[3] Missouri Statutes, s. 3,650–3,653.

ventory may be required from time to time whenever any property belonging to such estate shall be discovered, and all such inventories shall be attested and verified. The guardian has the usual powers to sue, to collect or pay debts, etc.

The real estate may be sold on the petition of the guardian when the personal property is insufficient for the discharge of the debts and the maintenance of the ward and his family. Every such sale shall be made under the direction of the probate court.[1]

Contracts may be made by the ward with the consent of the guardian; without such consent they are void.[2]

CONFINEMENT OF THE INSANE.—If any person shall be furiously mad, or so far disordered in his mind as to endanger his own person or the person or property of others, it shall be the duty of the guardian or other person under whose care he may be, and who is bound to provide for his support, to confine him until the next sitting of the probate court, which shall make such order for the restraint, support, and safe-keeping of such person as the circumstances of the case shall require. If such person shall not be confined by the person having charge of him, or if there be no person having such charge, any judge of the court of record or any two justices of the peace may cause such insane person to be apprehended, pending an inquisition.

If any insane person be admitted to the State lunatic asylums as a patient, the guardian shall pay for his support and expense at such asylum out of the estate of such ward. If such insane person comes under the class of insane poor persons, such person shall be supported and maintained by the county in the manner provided by law.

The above sections relate to idiots, lunaties, and persons of unsound mind and incapable of managing their affairs.[3]

INSANE ASYLUMS.—The asylums are under the general control of the State Board of Charities and Corrections, and boards of managers. They are intended for every species of insanity or mental derangement. The managers appoint the superintendent, assistants, etc.

The superintendent of each asylum shall be a physician of knowledge, skill, and ability in his profession and of experience in the management and treatment of the insane. He shall not

[1] Missouri Statutes, s. 3,654–3,660, 3,671–3,680, 3,684.

[2] *Ibid.*, s. 3,682.

[3] *Ibid.*, s. 3,694–3,697, 3,702.

while superintendent engage in the practice of his profession, but shall devote himself exclusively to the supervision and care of the asylum and its inmates.

He shall be the chief executive officer of the asylum and have the care and control of everything connected therewith.[1]

ADMISSION INTO ASYLUM.—Persons afflicted with any form of insanity may be admitted into the asylum, and any patient may be discharged by the superintendent whenever he may believe that the reason of such patient is restored. The superintendent may parole patients. Paying patients not sent to the asylum by order of the court may be admitted in accordance with the statutes and the by-laws of the asylum.

The several county courts may send to the asylum such of their insane poor as may be entitled to admission thereto. The counties thus sending shall pay semi-annually in cash, in advance, such sums for the support and maintenance of their insane poor as the board of managers may deem necessary. The indigent insane of the State always have the preference over those who have the ability to pay for their support in the asylum, and if there be no provision in the asylum for the accommodation of all the insane persons in the State, recent cases of insanity—meaning cases of less than one year's standing—shall have the preference over cases of more than one year's standing.[2]

CRIMINAL INSANE.—A person indicted for crime deemed insane may be committed pending recovery after an inquisition by jury.[3] When an accused is acquitted on account of insanity found by the jury to still continue, he shall be sent to an asylum.[4]

Insanity of convicts is determinable by the governor; of one sentenced to death by a jury.[5]

MONTANA.

[The references are to Montana Codes, Annotated, 1895.]

JURISDICTION.—The care and custody of the property and person of insane and other incompetent persons is vested in the district court (of probate).

APPOINTMENT OF GUARDIAN.—Upon the verified petition

[1] Missouri Statutes, s. 5,059, 4,894, 4,849–4,855.
[2] *Ibid.*, s. 4,856–4,869.
[3] *Ibid.*, s. 2,603–2,606.
[4] *Ibid.*, s. 4,885, 4,886; *cf.* s. 2,605, 2,606.
[5] *Ibid.*, s. 2,666–2,669, 4,889, 4,889a.

of a relative or friend that the person is insane or mentally incompetent to manage his property, the judge must give notice to the alleged incompetent person of the time and place of hearing the case, not less than five days before the time so appointed, and such person, if able, must be in attendance before him on the hearing.

If, after a full hearing and examination, it appears to the judge that the person is incapable of taking care of himself and managing his property, he must appoint a guardian of his person and estate.

Every such guardian has the care and custody of the person of his ward, and the management of all his estate, until he is legally discharged. He must give a bond to such ward in the manner prescribed to the guardian of a minor.

Every such guardian has all the usual powers and duties as specified in the act relating to guardians in general.[1]

Restoration of Insane Person.—Any person declared insane, or his guardian or any relative within the third degree, or any friend, may petition the district court to have the fact of his restoration to capacity judicially determined. Upon receiving the petition, the judge shall appoint a day for the hearing, and upon the petitioner's request, order an investigation before the jury, which shall be summoned and empanelled in the same manner as juries in civil actions. A notice shall be given to the guardian, husband, or wife, if there be one, or father or mother if living in the county. On the trial any person, in the discretion of the judge, may contest the right and the relief demanded. Witnesses may be subpœnaed and examined as in other cases. If it be found that the insane person be of sound mind and capable of taking care of himself and his property, his restoration shall be adjudged and the guardianship shall cease.[2]

Commissioners of the Insane.—The governor, secretary of state, and attorney-general constitute the State Board of Commissioners of the Insane.

Such commissioners have power to provide by contract for the proper custody, maintenance, and treatment of the insane in what is to be called the State asylum.

The board is authorized to contract for the care and mainte-

[1] Montana Code of Civil Procedure, s. 2,970–2,988.

[2] *Ibid.*, s. 2,973.

nance of the indigent insane, letting the contract to the lowest bidder.

The commissoners have power to control, inspect, and provide rules for the State asylum.

The contract made shall require the person entering into it to provide suitable apartments for the safe-keeping of the insane, and to furnish all attendance and treatment. The contractor is required to give bond.

Patients may also be sent to friends or institutions outside of the State.

The above provisions apply to idiots.[1]

Examination and Commitment.—Any magistrate of the county may, upon the verified application of any person setting forth that a person endangers health, person, or property by reason of mental derangement, cause such person to be brought before the district judge. Such judge shall summon two witnesses best acquainted with the person, and shall also summon two graduates in medicine, who shall examine the person and also hear the testimony. If the physicians certify the person to be insane, and the judge is of the opinion that he endangers health, person, or property by reason of mental derangement, he shall be sent to the State asylum.[2]

Correspondents of Inmate of Asylum.—Every inmate of any insane asylum is allowed to choose one individual to whom he may write whenever he desires, and over these letters there is to be no censorship exercised by any of the asylum officials. They are to be furnished with writing materials, and all such letters shall be dropped in the post-office box by the writers, accompanied by the attendant, when necessary.

A true copy of the name of every individual chosen as the inmate's correspondent, and by whom chosen, shall be registered and posted in some public place in the insane asylum.[3]

Criminal Insane.—A special jury may be called to determine the sanity of any person whose case is called for trial or during the trial, or after conviction. If he be found insane he shall be committed to the State asylum. The accused has the affirmative of the issue.[4]

[1] Montana Political Code, s. 2,260–2,269. 2,280–2,284.
[2] *Ibid.*, s. 2,300–2,311.
[3] *Ibid.*, s. 2,285–2,289.
[4] Penal Code, s. 2,521–2,526.

The present insanity of one acquitted on the ground of insanity shall be tried by a special jury.[1]

Nebraska.

[The references are to Cobbey's Annotated Statutes of Nebraska, 1903, Supplement, 1905, and to Brown and Wheeler's Compiled Statutes, 1907. Both editions are authorized.]

Definitions.—The term "insane" includes every species of insanity or mental derangement. The term "idiot" is restricted to persons supposed to be naturally without mind.

Idiots are not kept in the State asylums, but maintained the same as other poor.[2]

Guardians.—The probate court may appoint a guardian for an insane or incompetent person, from age or otherwise, upon the application of relatives or friends of such person and after a notice given to the supposed insane person of the time and place of hearing, not less than fourteen days.[3]

If, after a hearing, the court determine that such person is incapable of managing his property or taking care of himself, he shall appoint a guardian. Such guardian shall have the care and custody of the person and the management of all of the estate of his ward. Upon a like application, a guardian may be appointed for a spendthrift after due notice and a full hearing.

The powers and duties of guardians as to the management of the estates of their wards are similar in all respects to those of guardians of minors.[4]

Insane Asylums.—The insane asylum located at Lincoln known as the Nebraska Hospital for the Insane is under the charge of three trustees, who have the general control and management of the hospital, with full power to make all by-laws necessary for its government. It is the duty of a majority of the board to visit the hospital quarterly.

The governor shall appoint a superintendent, who may appoint two assistant physicians for the hospital of the insane, one of whom shall be a woman, whose term of office shall be six years, and who may be removed at any time by the governor.

[1] Penal Code, s. 2,159.
[2] B. and W., s. 3,844, Cobbey, s. 9,643.
[3] B. and W., s. 3,691, Cobbey, s. 5,384.
[4] B. and W., s. 3,692–3,698, Cobbey, s. 5,385–5,391.

The superintendent shall be a physician of acknowledged skill and ability and a graduate of a regular medical college. He is the chief executive officer of the hospital, and holds his office for a term of six years. He has the entire control of the medical, moral, and dietetic treatment of the patients, and shall see that the several officers of the institution faithfully and diligently discharge their respective duties.[1]

There are also an insane hospital at Norfolk, and the asylum for the incurable insane at Hastings. They are under the control of the board of public lands and buildings. Officers are appointed by the governor.[2]

County Commissioners of Insanity.—There is in each county a board of commissioners, consisting of three persons, styled the commissioners of insanity. The clerk of the district court is *ex officio* a member of the board, and the clerk of the same. The other members are appointed by the judge of the district court, one of whom shall be a respectable practising physician, and the other a respectable practising lawyer. Such commissioners have cognizance of all applications for admission into the State hospital or for the safe-keeping otherwise of insane persons, within their respective counties. Also, of persons addicted to the use of narcotics.[3]

Admission into the Hospital.—Application for admission to the State hospital must be made in writing in the nature of an information verified by affidavit, stating that the person in whose behalf the application is made is believed by the informant to be insane and a fit subject for custody and treatment in the hospital.

On the filing of such information, the commissioners of insanity shall investigate the grounds of the information. For this purpose they may require the person alleged to be insane to be brought before them and provide them with suitable custody, until their investigation shall be concluded. They shall hear the testimony for and against such application if any is offered. The commissioners shall appoint some regular practising physician of the county to visit or see such person and make a personal examination touching the truth of the allegations in the informa-

[1] B. and W., s. 3,794–3,807, Cobbey, s. 9,590–9,605.

[2] B. and W., s. 3,852–3,854, Cobbey, s. 9,651–9,656.

[3] B. and W., s. 3,808–3,811, Cobbey, s. 9,606–9,609; Cobbey, Supp., s. 9,650a–9,650h.

tion. Such physician shall certify that he has in pursuance of his appointment made a careful personal examination, and on such examination he finds the person in question insane if such be the fact.

On the return of the physician's certificate the commissioners shall conclude their investigations, and having done so, shall find whether the person alleged to be insane is insane, and if insane, whether a fit subject for treatment and custody in the hospital. If they find such person insane and a fit subject for custody and treatment in the hospital, they shall issue their warrant stating such finding, authorizing the superintendent of the hospital to receive such person as a patient therein. Such warrant and a duplicate with finding and certificate of the physician shall be delivered to the sheriff of the county, who shall execute the same by conveying such person to the hospital and delivering him with such duplicate and physician's certificate and finding to the superintendent.[1]

DISCHARGES.—Discharges are under the control of the superintendent. The writ of habeas corpus is available to secure discharge.[2]

NEVADA.

[The references are to Compiled Laws of Nevada, Cutting, 1900.]

JURISDICTION.—The district courts have jurisdiction over the person and estates of idiots and insane persons.[3]

COMMITMENT.—Upon the application under oath of any person that any indigent person is dangerously insane or mentally deranged, or that any bona fide resident for five years is an idiot or feeble-minded, the district judge shall cause such person to be brought before him, and summon witnesses; and also summon one or more graduates of medicine to appear and examine the person, and if after such examination and a careful hearing they certify on oath that the indigent person is insane, or idiotic or feeble-minded, and if the district judge be satisfied of the existence of insanity and that it would be dangerous for such insane person to be at large, or that the person is an idiot or feeble-

[1] B. and W., s. 3,812–3,814, Cobbey, s. 9,610–9,612.

[2] B. and W., s. 3,833, 3,831, Cobbey, s. 9,631, 9,629.

[3] Nevada Compiled Laws, s. 2,520.

minded, he shall direct such person to be conveyed to the State insane asylum.[1]

Appointment of Guardian.—When the insane person is able by the possession of property to pay the expenses attendant to his commitment and maintenance at the State asylum, the judge shall appoint a guardian, who shall be subject to the general law in relation to guardians as far as the same may be applicable. If there is not sufficient money in hand, the judge shall order the sale of the property of such person, or so much thereof as may be necessary, and the guardian shall appoint trustees to pay all proper costs and charges incidental to the care and support of such insane person. If such insane person has no property, but has relatives in the degree of husband or wife or father or mother of sufficient means to support such insane person, the judge shall order all such expenses to be paid by them and may assess the same among such kindred as he may deem just and equitable.[2]

On petition under oath by any relative or friend, the district judge may appoint a guardian of any incompetent person, after an examination. Such guardian has the usual powers.[3]

Commissioners for the Care and Maintenance of the Indigent Insane.—The governor, State comptroller, and State treasurer constitute a board of commissioners for the purpose of providing for the care and maintenance of the indigent insane.

Such board has full power and control of the State asylum and may establish such rules and regulations for the care thereof as they may deem proper. They shall elect one resident physician who shall be general superintendent, subject to the order and direction of such board.[4]

Criminal Insane.—Before trial or before sentence the question of sanity may be tried by a special jury.[5]

The insanity of convicts is tried by a commission.[6]

[1] Nevada Compiled Laws, s. 1,469, 1,473.
[2] *Ibid.*, s. 1,465.
[3] *Ibid.*, s. 1,467, 1,468.
[4] *Ibid.*, s. 572–574.
[5] *Ibid.*, s. 4,410, 4,423–4,427, 4,536–4,545.
[6] *Ibid.*, s. 1,459–1,460.

New Hampshire.

[The references are to Public Statutes of New Hampshire, 1901.]

Definition.—The words "insane person" shall include every idiot, non compos, lunatic, insane, or distracted person.

The word "spendthrift" shall include every one liable to be put under guardianship on account of excessive drinking, gaming, idleness, debauchery, or vicious habits of any kind.[1]

Jurisdiction.—The care and custody of the person and property of insane persons is vested in the supreme court.

Guardians of Insane Persons and Spendthrifts. Appointment.—On the application of a relative or friend of an insane person, or of the overseer of the poor of the town where he lives, the probate judge shall cause inquisition with notice to be made by three suitable persons.

If, upon the return of the inquisition and due examination, it is decreed that the person is insane, the judge shall appoint a guardian over him.

The person who by excessive drinking, etc., so wastes his estate or neglects his business as to expose him or his family to want or suffering shall be deemed a spendthrift, and upon complaint in writing made to the judge of probate the judge shall appoint a day of hearing, and if upon due notice and examination it appears that such person is a spendthrift, the judge shall appoint a suitable person to be his guardian.

Every guardian so appointed shall immediately give public notice thereof in some newspaper circulated in the vicinity, or in such newspaper as the court shall direct.[2]

Upon his own application, a person who shall deem himself unfitted by reason of age or other mental or physical disability may have a guardian appointed by the court of probate.[3]

Powers of Guardians.—The guardians of a spendthrift may employ him or his children in any suitable labor, or bind them out by written contract for a term not exceeding one year.

If the judge is satisfied that the estate of the ward is not sufficient to discharge his just debts, he may decree that the es-

[1] New Hampshire Statutes, title 2, c. 2, s. 18, 19.

[2] *Ibid.*, title 24, c. 179.

[3] Laws of 1899, chap. 35; Pub. Stats., 1901, p. 603.

tate be settled as insolvent, and thereupon such proceedings may be had as in the case of insolvent estates of deceased persons.

Such guardians possess all the powers of guardians of minors, and, subject to the direction of the probate judge, shall have the management and control of the property of the ward.

COMMITMENT TO ASYLUM.—The parent, guardian, or friends of any insane person may cause him to be committed to an asylum with the consent of the trustees, and there supported on such terms as they may agree.

An insane pauper supported by the town may be committed to an asylum by order of the overseers of the poor, and there supported at the expense of the town. If the overseers neglect to make such order, the supreme court or any judge thereof may order such pauper to be committed.

If any insane person is in such condition as to render it dangerous for him to be at large, the judge of probate on the petition of any person, and upon notice to a selectman of his town or to his guardian, may commit such insane person.

No person shall be committed to the asylum, except by an order of the supreme court or the judge of probate, without the certificate of two reputable physicians that such person is insane, given after a personal examination made within one week of the committal. The court may appoint two physicians to make the examination.[1]

SUPPORT AT ASYLUM.—Any insane person thus committed who has no means of support and no relatives of sufficient ability chargeable therewith, and no settlement in any town of this State, shall be supported by the county from which he was committed. Insane persons charged with crime, the punishment for which is death or confinement in the State prison, shall be supported at the expense of the State.

The county or town paying the expenses of the support of an inmate may recover the amount paid of the inmate if of sufficient ability to pay.[2]

DISCHARGE FROM ASYLUM.—Any person may be discharged from such asylum by any three of the trustees, by the commission of lunacy, or by the justices of the supreme court, when-

[1] New Hampshire Statutes, title 3, c. 10, s. 14–19. Laws of 1895, chap. 14, sec. 1; Pub. Stats., 1901, p. 89.

[2] *Ibid.*, s. 20–23.

ever a further detention at the asylum is in their opinion unnecessary. The supreme court or a justice thereof may investigate and discharge summarily without the intervention of a writ.[1]

Trustees to Visit Asylum.—One of the trustees, at least twice every month and without previous notice, shall visit the asylum and give opportunity to every inmate to make to him in private any statements he may wish. If, in their judgment, a further detention is unnecessary, it shall be their duty to discharge such inmate.[2]

Commission of Lunacy.—All persons deprived of their liberty by being committed to custody as insane persons shall be wards of the State and subject to State supervision.

The State board of health shall constitute a commission of lunacy. The commission, or one or more of their members, shall, without previous notice, visit and thoroughly inspect all institutions for insane persons as often as once in four months.

The commission shall keep a correct record of the number of commitments, discharges, and deaths at each asylum, and of the age, sex, and nationality of each person committed, discharged, or deceased and report the same annually to the governor and counsel.

The superintendent of every asylum shall, within three days after the commitment thereof of any person, notify the commission, and such superintendent shall at all times furnish to the board such information as they may request.[3]

New Jersey.

[The references are to General Statutes of New Jersey, 1895.]

Inquest of Idiocy and Lunacy.—All cases of idiocy and lunacy are determined by inquest and a commission of idiocy and lunacy issued out of the court of chancery and returnable thereto. If, upon such inquest, idiocy or lunacy be found, the chancellor shall cause to be transmitted to the orphans' court of the county where such lunatic or idiot resides a certified copy of all proceedings.

The commission is to be tried by jury composed of twelve jurors.[4]

[1] New Hampshire Statutes, s. 27. Laws of 1895, chap. 14, sec. 2; Pub. Stats. 1901, p. 90.

[2] *Ibid.*, s. 28.

[3] *Ibid.*, s. 31–35.

[4] New Jersey General Statutes, p. 1,696, s. 1, p. 1,709, s. 59.

Appointment of Guardian.—Upon return made and application therefor to the orphans' court, such court shall appoint a guardian of such idiot or lunatic, who shall have the care and safe-keeping of his person and property.[1]

Court May Order Sale of Lands.—If any such idiot or lunatic who owns lands or real estate, is justly indebted beyond his ability to pay, or if his personal estate is insufficient for the support and maintenance of such lunatic or idiot and his household, or if a sale will be to his advantage, the chancellor or the orphans' court may order the guardian to sell such part of the lunatic's real property as the court may deem sufficient to pay his debts and the necessary expense for the support and maintenance of the idiot or lunatic or his household. The guardian shall make a deed to the purchaser for the real estate so sold, which shall set forth the order at large, and shall vest in the purchaser as good a title to the estate as the idiot or lunatic possessed at the time of the making of the order.[2]

Bond of Guardian.—Every guardian ordered to sell lands shall, before or at the time of making the report of the sale, enter into a bond in such security as the chancellor shall deem sufficient for the faithful discharge of the trust committed to him.[3]

Proceeds of Sale.—All moneys arising from any sale shall be put out at interest on good and sufficient security of unencumbered real estate, or if the chancellor shall so direct, in public stock of United States or of this State, but in no other way whatever.

Whenever after a sale so made it shall become necessary to apply any of the proceeds to the support of such idiot or lunatic, the guardian shall apply to the orphans' court, who shall, on due proof in addition to the oath of such guardian that such application is necessary, order and direct the appropriation of so much of such proceeds as is necessary for such support, specifying in their order the amount per year.[4]

New Sureties to Bond.—Whenever the orphans' court shall suspect that the sureties of the guardian or any of them are failing or in dubious circumstances, they may require such

[1] General Statutes, pp. 1,696, 1,697, s. 1–3.
[2] *Ibid.*, p. 1,703, s. 31, p. 1,698, s. 5–6, p. 1,701, s. 26.
[3] *Ibid.*, p. 1,698, s. 10.
[4] *Ibid.*, p. 1,698, s. 13.

guardian to give additional sureties, and upon refusal or neglect may displace such guardian and appoint another in his place.[1]

Death of Guardian.—In case of the death of any guardian, the orphans' court shall forthwith appoint another.

Whenever a new guardian is appointed the representatives of the deceased guardian shall account to such new guardian for all property in their possession or under their control belonging to such idiot or lunatic.[2]

Account of Guardians.—Guardians of idiots or lunatics shall, once in three years or oftener, in case the orphans' court shall so order and direct, render to the court from whom the appointment was received a true account of the administration of the estate of such idiot or lunatic and on the death of such idiot or lunatic, or upon his restoration, the guardian may be compelled to render an account of his administration of the estate in the same manner as executors and administrators.[3]

Idiot or Lunatic not to be Imprisoned.—No lunatic or idiot during the time of his lunacy shall be committed or detained in prison for want of bail or his body in execution in any civil action; and in case any idiot or lunatic shall be so arrested in any civil suit, he shall be discharged on motion by the court out of which the process issued, or upon a writ of habeas corpus, issued out of the court of chancery or of the supreme court.[4]

Dangerous Lunatic at Large.—Any two justices of the peace of any county in which any lunatic furiously mad or dangerous shall be found, may, by warrant, cause such person to be apprehended and kept safely locked up and chained if necessary, in any place provided in such county for the reception of maniacs or lunatic persons, and if there be no such place, in the jail of such county.

If such lunatic be possessed of property, the expense incurred by such detention shall be paid therefrom; but if he possess no property, then such expense shall be charged upon the city or township in which such person is legally settled in the same manner as other poor persons.[5]

County Lunatic Asylums.—There may be maintained in each of the counties where the expense of the maintenance of

[1] General Statutes, p. 1,699, s. 16.
[2] *Ibid.*, p. 1,699, s. 17, 18.
[3] *Ibid.*, p. 1,699, s. 19.
[4] *Ibid.*, p. 1,700, s. 20.
[5] *Ibid.*, p. 1,700, s. 21, p. 1,706, s. 41, 44, p. 1,707, s. 49.

insane paupers is a county charge, a county insane asylum. Such asylum is under the care and management of the board of freeholders of the county. All insane paupers having a legal settlement in the county are committed to such county asylums.[1]

STATE HOSPITALS.—The State hospitals are located at Morris Plains and at Trenton. The management and control of both asylums is in the non-partisan State board of managers, consisting of eight persons appointed by the governor, by and with the advice of the senate, and holding office for the term of five years.

They are required to make an annual visit to each county asylum receiving State aid, at least once in each year.

They are authorized to make, adopt, and enforce rules and regulations for the distribution between the two hospitals of all patients sent thereto, and for the removal of patients from one to the other. They also have power to appoint medical directors for each hospital, and as many assistant physicians as they deem necessary.

Medical directors have charge, direction, and control of all patients and of all persons engaged in the care of such patients, subject to the rules, regulations, and by-laws adopted by the board. Such managers must maintain an effective inspection of such hospitals, for which purpose one or more of them shall visit each of them at least once in every week, two or more at least once in every month, a majority at least once in every three months, and the total board once a year. They shall annually report to the governor the year's operations and the actual state of the hospitals.[2]

COMMITMENT OF INSANE PAUPERS TO STATE HOSPITALS.—The overseer of the poor of the town where the insane pauper resides shall make application to a judge of the court of common pleas of the county, and such judge shall call one reputable physician and fully investigate the facts of the case; and if satisfied after such examination of the insanity of the pauper, he shall issue an order requiring him, without delay, to take such insane pauper to the proper hospital.

If such insane person is in indigent circumstances, but not a pauper, the same proceedings shall be had; and if the said judge

[1] General Statutes, p. 1,993, s. 67–94.

[2] *Ibid.*, p. 1,990, s. 54–58, p. 1,982, s. 1, 4–12.

shall make a certificate that satisfactory proof has been adduced, showing his estate to be insufficient to support him and his family, he shall then be admitted into one of such hospitals and supported there at the expense of the county.[1]

New York.

Note: The New York statutes relating to lunacy are most elaborate and numerous; different enactments are extant unrepealed, which seem to cover more or less the same ground. The greater number of the statutes relating to the care and custody of the insane have been codified in the Insanity Law, originally enacted as chapter 545 of the laws of 1896, but much amended. It is now Chapter 27 of the Consolidated Laws of 1909. Inasmuch as the system of control, protection, and administration under the provisions of the Insanity Law has on the whole been found satisfactory, we give a full digest as a specimen of legislation for the insane.

The State Commission in Lunacy.—The State Commission in Lunacy consists of three commissioners: the president, a physician, graduate of medical college, of experience in the management of institutions for the insane; another, an attorney-at-law; the third, a reputable citizen. President's salary, $7,500, and $1,200 for expenses; salary of others, $5,000, and $1,200 for expenses. The president holds office during good behavior; others, term of six years. The commissioners are appointed by the governor.[2] The commission is to appoint an office force, and a medical inspector to visit State hospitals and other institutions.[3]

The commission is charged with execution of laws relating to the custody, care, and treatment of the insane, "not including feeble-minded persons and epileptics as such and idiots." They have supervision of all institutions public and private, and may examine all books, papers, etc. They may permit any religious or missionary corporation or body to erect a building on any State hospital grounds for religious services for inmates.[4] They shall have general oversight of State hospitals and control of the property thereof; may accept and hold in behalf of the State devises and bequests for the insane, and invest and manage the same each as a separate fund.[5] They shall visit every State hos-

[1] General Statutes, s. 29, 30.

[2] Insanity Law, sec. 3 as amended, c. 490, Laws of 1905. Also State Constitution, art. 8, s. 11, 12, 13, 15.

[3] Sec. 4 as amended, c. 490, Laws of 1905.

[4] Sec. 6 as amended, c. 107, Laws of 1906.

[5] Sec. 7, amended, c. 462, Laws of 1907.

pital by a majority and every private institution at least singly at least twice each year, make thorough investigation, and report recommendations at the next meeting of the commission. A conference with the managers of such institutions shall be held at least once each year.[1]

Any member of the commission or the medical inspector may visit any sanitarium or other institution for the sick and any poorhouse, etc., to ascertain whether insane persons are unlawfully confined there.[2]

The commission may make regulations as to correspondence of the insane in custody. All such insane may correspond without restriction with the county judge and district attorney of the county from which they were committed. (For regulations adopted, see Form 40 of the commission in lunacy.) Books of record and blank forms in the hospitals shall be uniform and approved by the commission.[3]

The commission shall report to the legislature annually, with estimates of expenditures. It shall fix the capacity of the State hospitals in the report.[4]

The commission and each State hospital shall make monthly financial reports to the State comptroller.

The commission shall divide the State into hospital districts, in proportion to the capacity of the hospitals. Changes are to be made only after opportunity given managers of hospitals affected to be heard. Such changes are to be filed with secretary of state and county officers.[5]

Physicians who receive certificates as medical examiners are to file same with county clerk and commission.[6]

The commission shall keep on file in its office a private record of all patients in State hospitals and private institutions, showing name, residence, dates, etc., etc. Institutions shall furnish data for this record, and other information when required.[7]

The commission shall provide for the wants of poor and indigent insane, recommending to legislature the establishment of other State hospitals when needed. It shall furnish estimates of

[1] Insanity Law, sec. 8, amended, c. 490, Laws of 1905.
[2] Sec. 9, amended, c. 497, Laws of 1905, s. 72, 74.
[3] Sec. 10.
[4] Sec. 11, amended, c. 490, Laws of 1905.
[5] Secs. 12–13, amended, c. 490, Laws of 1905.
[6] Sec. 14.
[7] Secs. 15–16.

the probable number of patients and necessary expenses. The cost of buildings and equipment is not to exceed $550 per capita for persons to be confined therein, except that for the care of the acute and curable class the same may cost $1,000 per capita.[1]

The commission shall appoint after civil service examination a director of the pathological institute and laboratory in New York City.[2]

The commission shall appoint an attorney for each State hospital (one attorney for Manhattan and Central Islip hospitals).[3]

A board of alienists for the examination of insane, idiotic, imbecile, and epileptic immigrants, and alien and non-resident insane, shall consist of three physicians, graduates, of ten years' practice and five years' experience in care of insane in State hospitals; salary, $5,000; appointed by the commission. The board is to examine immigrants entering this country at the port of New York, and shall have charge under supervision of the commission in lunacy of the removal of non-resident insane.[4]

The State Hospitals.—There are thirteen State hospitals, two of them homœopathic and two for the criminal insane.[5] Each hospital is under the control, subject to the statutory powers of the commission, of a non-salaried board of managers of seven members, of whom at least two are women. A committee of one member from each of the boards shall establish by-laws, rules, and regulations governing the appointment and duties of officers and employés of hospitals, and the internal government of the same, uniform for all hospitals. At monthly meetings the board shall make an inspection of the hospital and report the same to the governor together with its minutes. The board shall hear and determine the truth of all charges made against the superintendent or any other officer or employé of the hospital, and may issue subpœnas and take testimony.[6]

The commission in lunacy shall appoint superintendents of hospitals subject to the approval of the board of managers. The superintendent is to be a well-educated physician, a graduate, having five years' experience in an institution for the care of the

[1] Insanity Law, sec. 17, amended, c. 284, Laws of 1906.

[2] Sec. 170–173, amended, c. 490, Laws of 1905.

[3] Sec. 18, amended, c. 490, Laws of 1905.

[4] Sec. 19, amended, c. 213, Laws of 1908.

[5] Sec. 40, amended, c. 490, Laws of 1905; s. 90, c. 520, Laws of 1899; *cf.* c. 524, Laws of 1907.

[6] Sec. 43, amended, c. 490, Laws of 1905.

insane. He shall be the treasurer unless another is designated by the commission. He may be removed by a majority of the board of managers for cause stated in writing after a hearing and approved by the commission and suspended pending the hearing.[1]

The superintendent shall be the chief executive officer. He has the power to employ and discharge for cause after a hearing, officers and employés. The superintendent, assistant physicians, including a woman physician (graduates), the steward, and matron, shall reside on the grounds (except on approval of commission).[2] He may appoint employés as special police.

The superintendent shall establish and supervise a training-school for attendants and nurses.

He shall hold at least two conferences weekly with the medical staff. He shall cause a complete clinical record of each patient to be kept, and complete records of business and accounts of the hospital and of patients, etc.[3]

The superintendents shall meet at least once in three months at the State capital for conference. Each board of managers may send one of its members.[4]

The commission with the approval of State officers shall fix the wage scale of all officers and employés, uniform for like service and grade. Food supplies shall be allowed for officers, employés, etc.[5]

Salary and Wage Scale.

The salary and wage scales as fixed by orders of the commission of February 13, 1906, and February 23, 1905, are as follows: Resident officers—(1) superintendent and medical director, appointed in institutions having a population of 4,000, salary $6,000; (2) medical superintendents, $3,500 to $4,500, $100 added each year; (3) first assistant physicians, $2,000 to $2,500, $100 added each year; (4) second assistant physicians, $1,500 to $2,000, $100 additional each year; (5) assistant physicians, $1,200 to $1,500, $100 added each year; (6) junior physicians, $900 to $1,200, $100 added each year; (7) women physicians, $1,000 to $1,500, $100 added each year; (8) medical internes, $600; (9) stewards, outside of Manhattan and Long Island State hospitals, $1,500 to $2,000, $100 added each year, and where manufacturing department with output of $65,000 per annum, $500 additional; (10) resident stewards, in hospitals where there is a purchasing steward, $1,500; (11) purchasing steward, one non-resident purchasing steward, for Manhattan and Long

[1] Insanity Law, sec. 44, amended, c. 490, Laws of 1905.

[2] See. 49.

[3] Sec. 45, amended, c. 490, Laws of 1905.

[4] Sec. 48, amended, c. 490, Laws of 1905.

[5] Sees. 49–50, amended, c. 714, Laws of 1904.

Island State hospitals, $4,000 and maintenance; (12) assistant steward, nonresident assistant steward for Manhattan State Hospital, $2,000 and maintenance; (13) matrons, $65 to $75 per month, $2 per month added.

Employees who are graduates of a training school receive increased salaries provided they pass an examination conducted by a board appointed at conference of superintendents with commission. They are known as nurses, the non-graduates as attendants. Nurses in charge of wards receive per month, men, $35.00 to $41.25; women, $28.75 to $35.00. Nurses, men, $31.25 to $37.50; women, $25.00 to $31.25. Attendants in charge of wards, men, $31.25 to $37.50; women, $25.00 to $31.25. Attendants, men, $22.00 to $30.00; women, $16.00 to $22.50. Skilled attendants, men, $37.50 to $43.75; women, $31.25 to $37.50.

[The wage scale is too long to quote in full. It is Form 394 of the New York State commission in lunacy.]

The superintendent has power to maintain an action in the name of the hospital upon any cause of action accruing to the hospital, including any liability for the care of the insane.[1]

No civil action may be brought against a commissioner in lunacy or officer or manager of hospital on account of his official duties except by permission of a justice of the supreme court. Any just claim against one of these or an employé for which the State would be legally or equitably liable may be paid from funds appropriated for the care of the insane.[2]

Private Institutions.—No private institution for the care, custody, or treatment of the insane for compensation or hire may be kept without a license of the commission in lunacy. The commission shall have visitatorial power.[3]

Justices of the supreme court may appoint visitors to State hospitals upon nomination of the State Charities Aid Association.[4]

The commission may exercise the power of eminent domain to take land for State hospitals.[5]

No public street or railroad shall be extended through hospital grounds.[6]

Commitment, Custody, and Discharge of the Insane.—An insane person not in confinement on a criminal charge may upon petition therefor be committed to an institution on an order of a judge of a court of record of the city and county, or of a justice of the supreme court of the district, where such

[1] Insanity Law, sec. 54, amended, c. 490, Laws of 1905.
[2] Sec. 58, amended, c. 490, Laws of 1905.
[3] Secs. 59–60.
[4] Sec. 61.
[5] Sec. 64, amended, c. 490, Laws of 1905.
[6] Sec. 66, amended, c. 26, Laws of 1902.

person resides or may be, upon a certificate of lunacy made by two qualified medical examiners in lunacy. Forms for the certificate and petition are to be furnished by the commission in lunacy. No idiot shall be confined in a State hospital, but an epileptic or feeble-minded person becoming insane may be.[1]

The certificate must be made by two reputable physicians, graduates of an incorporated medical college, who have filed with the commission in lunacy their certificates as prescribed.[2] Neither of such examiners shall be a relative of the person applying for the order, or of the person alleged to be insane, or be connected with the institution to which it is proposed to commit him.[3]

Form of the medical certificate of lunacy as prescribed by the State commission in lunacy pursuant to sec. 60, chap. 545, Laws of 1896 (sec. 81, chap. 27, Consol. Laws of 1909):

STATE OF NEW YORK—STATE COMMISSION IN LUNACY

The following should be filled out only by two medical examiners qualified according to section 60:

CERTIFICATE OF LUNACY

STATE OF NEW YORK,
County of _____ } ss:
City, Town or Village _____

STATEMENT OF FACTS

1. Patient resides at_____, county of_____; age_____years; nativity (*if foreign, how long in U. S.*)_____; sex_____; color_____; occupation_____; single, married, widowed, divorced. (*Strike out words not required.*)

2. Birthplace of father_____; of mother_____

3. Number of previous attacks_____; present attack began_____190—. (*If the patient has ever been an inmate of an institution for the insane, state when and where, and whether discharged recovered or otherwise.*)_____

4. Was the present attack gradual or rapid in its onset?_____

5. What is the patient's general physical condition?_____(*If afflicted with any infirmity or disease other than insanity, state it.*)_____

6. Is the patient cleanly or uncleanly in personal habits?_____

7. Is the patient violent, dangerous, destructive, excited or depressed, homicidal or suicidal? (*If either homicide or suicide has been attempted or threatened, it should be so stated.*)_____

8. What is the supposed cause of the insanity? (*State both predisposing and exciting causes, if known.*)_____

[1] Insanity Law, sec. 80. [2] Sec. 81. [3] Sec. 81.

9. Has the patient insane relatives? If so, state the degree of consanguinity, and whether paternal or maternal._____

10. State the patient's habits as to the use of liquor, tobacco, opium, or other drug, and whether excessive or moderate._____

We,_____, a legal resident of_____ county, of_____, State of New York, and_____ a legal resident of_____, county of_____ and State aforesaid, being severally and duly sworn, do severally certify and each for himself certifies, with the exceptions which are hereinafter noted, as follows:

1. I am a graduate of an incorporated medical college, and a qualified medical examiner in lunacy; a certificate of my qualifications as such examiner, or certified copy thereof, is on file in the office of the State Commission in Lunacy, and I have received from its secretary an acknowledgment of the receipt of the same.

2. I have with care and diligence personally observed and examined *on the date of this certificate*, namely, on the_____ day of_____, 190__, _____, now residing or being at_____ _____ in the county of_____, and as a result of such joint examination find, and hereby certify to the fact, that he is insane and a proper subject for custody and treatment in some institution for the insane, as an insane person under the provisions of the statute.

3. I have formed the above opinion upon the subjoined facts:

a. facts indicating insanity personally observed by me, as follows:

The patient said (*State what the patient said, if anything, in presence of the examiners*):

_____

_____

The patient (*State what the patient did in presence of the examiners and also describe his or her appearance and manner*):

_____

_____

b. Other facts indicating insanity, including those communicated to me by others, as follows: (*State what, if any, significant change there has been in the patient's disposition, mental condition, business or social habits, or bodily health.*)

_____

_____

4. That the facts stated and information contained in this certificate are true to the best of my knowledge and belief.

_____, M.D.

_____, M.D.

Severally subscribed and sworn to before me this_____ day of_____, 190

_____

_____

The petition may be made by any person with whom the alleged insane person resides, or at whose house he may be, or by a brother or sister or nearer relative; by an overseer of the poor of the town, or the superintendent of the poor in the county where he may be. The petition shall be accompanied by the certificate of lunacy. Notice of the application shall be served personally at least one day before the application upon the person alleged to be insane, and if the petition is made by an overseer or superintendent of the poor, also upon the husband or wife, father or mother, or next of kin. The judge to whom application is made may dispense with personal service or direct service on another for cause stated. If no demand for a hearing is made the judge may commit, requiring additional proofs in his discretion. If it appears that the insane person is harmless the judge may order him placed in the care and custody of his relatives or a committee of his person, upon their written consent.[1]

Upon the demand of any relative or near friend the judge shall, or on his own motion he may, order a hearing within five days. The order shall be served on such persons as he may direct. The judge may, if he cannot hear the application, appoint a referee to report the testimony with his opinion. The judge shall, if commitment be made to a State hospital, report in writing the financial condition of the insane person and of the persons legally liable for his maintenance.[2]

The petition, certificate in lunacy, order directing a hearing, if any, decision, and order of commitment, shall be presented to the superintendent in charge of the institution, who shall file copies with the commission in lunacy. Unless the papers are in order, and in case the superintendent deems the person sane, he may refuse to receive him, or if received the commission may discharge him. No person shall be admitted under an order of commitment after five days from the date thereof.[3]

Upon the petition and certificate aforesaid, any person shown by the certificate to be dangerously insane or needing immediate treatment may be received in a State institution without a court order, but for five days only. The superintendent may refuse to receive such person if in his judgment such condition does not exist.[4]

[1] Insanity Law, sec. 82.
[2] Sec. 82.
[3] Sec. 82.
[4] Sec. 82, amended, Laws of 1903.

A person ordered committed or any friend in his behalf may apply to (another) justice of the supreme court who shall convene a jury as in proceedings for the appointment of a committee. A bond for costs must be given. If the verdict is that the person is insane an order of commitment shall be made and the procedure shall be as before. There shall be no stay pending the appeal except upon an order of a justice of the supreme court upon notice after a hearing. If a judge shall refuse to grant an order of commitment of a person dangerous to himself or others, if at large, he shall state his reasons in writing, and any person aggrieved may appeal.[1]

The costs are a charge upon the town, city, or county procuring the commitment, under this act or chapter 446, Laws of 1874, sec. 26 (see below). If the person be not poor or indigent, costs are payable from his estate or by the persons liable for his maintenance.[2]

All poor and indigent insane persons are to be supported by the State in a State hospital. The commission shall either directly or through the treasurer of the hospital obtain reimbursement in whole or in part from the patient's estate and from relatives or friends liable or assuming payment.[3]

The rate of payment by relatives, etc., shall be fixed by the commission, sufficient to pay a proper proportion of the cost of maintenance and necessary repairs and improvements.[4]

Any person committed to a State hospital in a criminal proceeding shall be maintained by the county from which he was committed, except in Matteawan Hospital.[5]

"The father, mother, husband, wife, and children of an insane person, if of sufficient ability, and the committee or guardian of his person and estate, if the estate is sufficient for the purpose, shall cause him to be properly and suitably cared for and maintained."[6]

[For provisions of law whereby they can be compelled to do so, see Code of Criminal Procedure, Sees. 914–920.]

Any person not properly cared for or dangerously insane may be committed upon application of the commission or superin-

[1] Insanity Law, sec. 83.
[2] Sec. 84, amended, c. 428, Laws of 1904.
[3] Sec. 85, amended, c. 546, Laws of 1901.
[4] Sec. 85.
[5] Secs. 85, 122.
[6] Sec. 86.

tendent or overseer of the poor. Costs are to be paid by persons liable to support him.[1]

"In all claims of the State upon relatives liable for the support of a patient or upon moneys or property held by said patient the State shall be deemed a preferred creditor."[2]

County, city, or town authorities shall attend to the commitment of the poor and indigent, and see that they are clean and comfortably clothed.[3]

Each patient shall be sent to a hospital within the district, etc., except as ordered by the commission, and unless homœopathic treatment desired, in which case, to one of the two homœopathic hospitals. The hospital shall send a trained attendant to conduct the patient to the hospital.[4]

Where an insane person has sufficient estate or relatives able, and is dangerous, the committee or relatives must provide a suitable place for his confinement. The superintendent or overseer of poor, etc., are charged with the enforcement of this provision. They may apply for a court order to apprehend such a person pending an application for his commitment. In no case shall such person be confined elsewhere than in a State hospital or licensed institution more than ten days; or ever be committed as a disorderly person to a jail, etc., unless he is violent and there is no other place; or ever be confined in the same room with a person charged with or convicted of crime.[5]

Any disorderly person apparently insane may be arrested by any peace officer and confined pending inquiry. In New York City arrests are to be made on information and warrant, and person to be committed to Bellevue Hospital, in Manhattan, or Bronx, or to care of commissioner of public charities, in Brooklyn, Queens, and Richmond, pending determination of insanity.[6]

Insane patients residents of the State may, when there is room, be admitted to State hospitals under special agreement.[7]

The superintendent of every institution for the insane shall keep a case-book, etc.[8]

[1] Insanity Law, sec. 86.
[2] Sec. 86.
[3] Sec. 87, amended, c. 146, Laws of 1903.
[4] Sec. 87.
[5] Sec. 88.
[6] Sec. 88, amended, c. 487, Laws of 1908.
[7] Sec. 89, amended, c. 26, Laws of 1902.
[8] Sec. 90.

When any State hospital is overcrowded, etc., the commission may transfer patients to another.[1]

Illegal confinement or improper care of any person may be investigated by the commission, summoning witnesses. It may order institutions to treat as directed, and when said order is approved by a justice of the supreme court, wilful disobedience is a criminal contempt. The commission shall give notice to the attorney-general before general investigation of an institution, who shall examine witnesses. Commissioners may visit any county or city almshouse to ascertain if insane persons are kept there.[2]

Discharge and Parole of Patients.—Any person confined or any friend may obtain a writ of *habeas corpus*, for inquiry as to the fact of insanity.[3]

The superintendent of a State hospital may discharge any patient, not committed in a criminal proceeding, who in his opinion (1) has recovered; (2) is a dotard, not insane; (3) who though not recovered may safely be discharged and has friends to care for him. Upon his refusal to discharge an unrecovered patient the court may after a hearing order such discharge, upon security being given. The superintendent may grant a parole not exceeding six months. The commission may order discharged any person improperly detained in any institution. A poor and indigent person discharged because an idiot, dotard, or epileptic, not insane, shall be cared for by the superintendent of the poor, etc., of the county from which he was committed.

A patient committed in a criminal proceeding may be discharged upon the superintendent's certificate, approved by any such court or judge.[4]

Clothing and money not exceeding $25 are to be furnished a discharged patient, if necessary.[5]

Miscellaneous.—The commission shall transfer to his own county or State any poor and indigent non-resident committed to a State hospital.[6]

Commitment of insane Indians is in same manner.[7]

[1] Insanity Law, sec. 91. See Form 112 of the Commission in Lunacy.
[2] Sec. 92.
[3] Sec. 93
[4] Sec. 94, amended, c. 261, Laws of 1908.
[5] Sec. 95.
[6] Sec. 96.
[7] Sec. 97.

Unclaimed personal effects of discharged or deceased patients may be sold at auction.[1]

Voluntary Patients in State Hospitals.—Pursuant to rules of the commission the superintendent of any State hospital except Matteawan and Dannemora (which are for criminal insane) "may receive and retain therein as a patient any person suitable for treatment, and who voluntarily makes written application therefor, and whose mental condition is such as to render him competent to make such application." Such person shall not be detained more than five days after giving notice in writing of his intention to leave.[2]

State Hospitals for Insane Criminals.—Matteawan State Hospital is for persons committed by courts in criminal proceedings, or male convicts becoming insane while undergoing sentence for one year or less for a misdemeanor, or all female convicts.[3]

The medical superintendent is appointed by the superintendent of State prisons. His qualifications and duties are similar to those of superintendents of other State hospitals.[4]

Insane convicts liable to be sent to Matteawan Hospital shall be transferred there upon petition, certificate, and order of the court, substantially as above (sec. 82 *et seq.*).[5]

When any insane convict's term of imprisonment expires, he may be detained, discharged upon recovery, or into custody of friends, or transferred to another institution.[6]

Upon recovery before expiration of his sentence, a convict shall be transferred to the prison or reformatory whence he came.[7]

Any inmate not a convict who recovers shall be discharged upon certificate of the superintendent, approved by the court or judge.[8]

The commission may transfer to Matteawan any person confined in another State hospital by an order in a criminal proceeding; or any insane person who has previously ever been sentenced to a term of imprisonment and still manifests criminal tendencies.

[1] Insanity Law, sec. 98, amended, c. 391, Laws of 1902.
[2] Sec. 99, added by c. 461, Laws of 1908.
[3] Sec. 110, amended, c. 525, Laws of 1904.
[4] Sees. 112–117.
[5] Sec. 118, amended, c. 525, Laws of 1904.
[6] Sec. 119.
[7] Sec. 120.
[8] Sec. 120.

From October 1st, 1904, all persons in Matteawan State Hospital shall be a charge upon the State.[1]

Correspondence of patients in Matteawan Hospital and visits are limited as provided in sec. 125.

Dannemora State Hospital is for male convicts declared insane while confined in State prisons or reformatories or in penitentiaries under sentence of more than one year.[2]

The medical superintendent is appointed by the superintendent of State prisons. His qualifications and duties are similar to those of the superintendent of Matteawan State Hospital, and of superintendents of other State hospitals.[3]

Upon the certificate of the physician of a State prison, reformatory, or penitentiary that a male prisoner confined therein and sentenced thereto for a felony is, in his opinion, insane, such prisoner shall be transferred to Dannemora Hospital.[4]

At the expiration of the convict's term, if he is still insane, the superintendent shall apply for an inquiry and an order of a judge authorizing him to retain the convict.[5]

After expiration of his term, any convict still insane but safe to be at large may be discharged to custody of friends, etc., or upon order of commission to another institution.[6]

Upon recovery before expiration of his term an insane convict shall be transferred to prison.[7]

Correspondence of prisoners and visits are limited, as provided in sec. 153.

Insane Persons under Death Sentence.—Any person under sentence of death found insane by a commission may be ordered removed by the Governor to the State lunatic asylum for insane criminals (Matteawan or Dannemora hospital) and confined there until recovery. When recovery is certified by the commission in lunacy, and a justice of the supreme court in the county where the asylum is located, the convict shall be returned to the sheriff to be dealt with according to law.[8]

If any person in confinement under indictment or sentence of imprisonment, or under any other than civil process, appears to be insane, the county judge shall make investigation. The pro-

[1] Insanity Law, sec. 122, amended, c. 525, Laws of 1904.
[2] Sec. 140.
[3] Sec. 141–147.
[4] Sec. 148.
[5] Sec. 149.
[6] Sec. 141.
[7] Sec. 142.
[8] Chap. 446, Laws of 1874, s. 21, amended, c. 267, Laws of 1876.

cedure is provided for. A commitment to a State hospital may follow.[1]

Service of Legal Process upon and Execution of Legal Papers by Inmates of Institutions.—It is provided by Form 27 of the State Commission in Lunacy that the superintendent or officer in charge of each institution for the care and treatment of the insane shall not permit service of legal process upon any inmate, other than citations for probate of wills, letters of administration, or final accountings in surrogate courts, or such as may be instituted for the appointment of committees, without an order of the court. The superintendent must make a record of any service of papers, file a copy thereof, and forward a copy to the committee or the nearest relative or friend. Persons intending to serve papers on an inmate should provide two copies, one to serve, the other for the superintendent's files.

No inmate shall be permitted to sign any bill, check, contract, instrument, etc., except on an order of the court, and a similar procedure shall be observed to that described above.

Insane Poor.—If any inmate of any State almshouse becomes insane, the superintendent of State and alien poor shall cause his removal to the State asylum.[2]

Insane Veterans, Etc.—If any inmate of the State Soldiers' and Sailors' Home be insane, he may be transferred to any State hospital, there to be maintained by the Home;[3] also any member of his family.[4]

Appointment of Committee of Lunatic, Etc.—"The jurisdiction of the supreme court extends to the custody of the person, and the care of the property, of a person incompetent to manage himself or his affairs, in consequence of lunacy, idiocy, habitual drunkenness, or imbecility arising from old age or loss of memory and understanding or other cause." When the county court has concurrent jurisdiction of those matters, the court first exercising it retains it exclusively. In all proceedings for the appointment of a committee, the person shall be designated as "an alleged incompetent person," and after such appointment as "an incompetent person."[5]

[1] Chap. 446, Laws of 1874, s. 62, amended, c. 417, Laws of 1898.

[2] Poor Law, Laws of 1896, c. 225, Consol. Laws of 1909, c. 42, s. 97.

[3] Public Buildings Law, Laws of 1893, c. 227, Consol. Laws of 1909, c. 44, s. 65.

[4] Poor Law, Laws of 1896, c. 225, Consol. Laws of 1909, c. 42, s. 82.

[5] Code of Civil Pro., s. 2,320.

DEFINITION.—In the construction of every New York statute, unless circumstances indicate a different meaning, "the terms lunatic and lunacy include every kind of unsoundness of mind except idiocy."[1]

The court must preserve the incompetent's "property from waste or destruction, and, out of the proceeds thereof, must provide for the payment of his debts, and for the safe-keeping and maintenance, and the education, when required, of the incompetent person and his family."[2]

Such jurisdiction must be exercised by means of a committee of the person, or property, or a portion of the property. The two may be the same or different individuals.[3]

Any person may present a petition for the appointment of a committee, to the special term of the supreme court or a justice of the court, within the district where the alleged incompetent resides, unless the incompetent is confined in a State hospital; if he be not a resident or his residence cannot be ascertained, then within the district where some of his property is situated.[4]

Where the incompetent has been committed to a State institution, a State officer or the superintendent may apply, in the district where the hospital is located, or where the incompetent resided. The court may, on notice to the person and the husband or wife if any, or the next of kin, appoint a committee.[5]

Costs not exceeding $25 and necessary disbursements may be awarded to the petitioner.[6]

When the incompetent has property and no other person petitions, the overseer or superintendent of the poor, etc., where he resides, shall apply.[7]

The petition must be verified and show the names and residences of husband or wife, next of kin and heirs of the alleged incompetent, the probable value of his property, and any conveyances during the alleged incompetency. Proof by affidavit of the essential facts must accompany it. Notice of the petition shall be required, unless dispensed with for cause, to the husband or wife, or one or more relatives, or an officer specified in the last section.[8]

[1] General Construction Law, Laws of 1892, c. 677, Consol. Laws of 1909, c. 22, s. 28.
[2] Code of Civil Pro., s. 2,321.
[3] *Ibid.*, s. 2,322.
[4] *Ibid.*, s. 2,323.
[5] *Ibid.*, s. 2,323*a*.
[6] *Ibid.*, s. 2,323*b*.
[7] *Ibid.*, s. 2,324.
[8] *Ibid.*, s. 2,325.

A committee, etc., appointed in a foreign country or State may be appointed committee of the property within the State of a non-resident on giving security.[1]

The court must, if a proper case appears, either direct that a commission issue to one or more persons, or direct a trial by jury before the court. If it appears that property has been transferred without adequate consideration the court may restrain the persons who have received it from disposing of it.[2]

If a commission is issued the commissioners shall be directed thereby to procure a jury and inquire into the matters set forth in the petition, the alleged incompetent's property, and other matters that may be specified.[3]

The commissioners shall be sworn, and carry out such directions. The jury shall consist of twelve to twenty-four persons. Upon the hearing the commissioners or a majority shall have the powers of the court. Twelve jurors must concur. The inquisition must be signed by the jurors concurring and by the commissioners or a majority and filed, annexed to the commission, with the clerk. The commissioners' compensation shall be fixed by the court; the jurors' shall be the same as trial jurors'; expenses shall be paid by the petitioner.[4]

When the trial is by a jury at a trial term of the court, distinct issues must be framed in the order. The procedure on the trial and the review of the trial are the same as in the case of the trial of an issue of fact in an action. Collateral issues may be inquired into by reference. The expenses must be paid by the petitioner.[5]

"When the petition alleges that the person, with respect to whom it pays for the appointment of a committee, is incompetent by reason of lunacy, the inquiry with respect to his competency, upon the execution of a commission, or the trial at a trial term, as prescribed in this title, must be confined to the question, whether he is so incompetent at the time of the inquiry; and testimony respecting anything said or done by him or his demeanor or state of mind more than two years before the hearing or trial, shall not be received as proof of lunacy, unless the court otherwise specially directs, in the order granting the commission, or directing the trial by jury."[6]

[1] Code of Civil Pro., s. 2,326.
[2] *Ibid.*, s. 2,327.
[3] *Ibid.*, s. 2,328.
[4] *Ibid.*, s. 2,329–2,333.
[5] *Ibid.*, s. 2,334.
[6] *Ibid.*, s. 2,335.

Upon the return of the commission or the verdict of the jury, the court must either direct a new trial or make a final order. Costs not exceeding $50 and disbursements may be awarded to successful party, payable when a committee is appointed from any funds in his hands; and the committee may be required to pay an attorney's fee not exceeding $50, and disbursements.[1]

Sections 2,325 to 2,336 do not apply to an application for a committee made on behalf of the State to secure reimbursement for maintenance in a State institution.[2]

Security must be given by a committee of the property, and may be required of a committee of the property.[3]

A committee of the property is entitled to the same compensation as an executor or administrator, with additional compensation when his services exceed those of such persons. The compensation of a committee of the person shall be fixed by the court.[4]

A committee is under the control of the court. He cannot dispose of real property except to lease it for a term of not exceeding five years except by special direction of the court.[5]

A committee of the property may maintain any action in his own name as committee that the incompetent might otherwise have maintained.[6]

In actions by or against a committee, the plaintiff may be required to give security for costs.[7]

A committee of the property must file an inventory and account in January of each year, etc.[8]

When the incompetent person becomes competent the committee must be discharged and his property restored to him.[9]

The powers of the committee cease with the death of the incompetent.[10]

A trust company may act as a committee of the property.[11]

The lunacy of a party to an arbitration with appointment of a committee revokes the submission.[12]

[1] Code of Civil Pro., s. 2,336.
[2] *Ibid.*, s. 2,336*a*.
[3] *Ibid.*, s. 2,337.
[4] *Ibid.*, s. 2,338.
[5] *Ibid.*, s. 2,339.
[6] *Ibid.*, s. 2,340–2,355.
[7] *Ibid.*, s. 3,271.
[8] *Ibid.*, s. 2,341–2,342.
[9] *Ibid.*, s. 2,343.
[10] *Ibid.*, s. 2,344.
[11] Banking Law, Laws of 1892, c. 689, Consol. Laws of 1909, c. 2, s. 186.
[12] Code of Civ. Pro., s. 2,382.

STATUTES OF LIMITATION.—Statutes of limitation generally are suspended during insanity.[1]

SALE, ETC., OF REAL PROPERTY OF INCOMPETENTS.—An order for the partition of real property held in joint tenancy or in common by an infant, idiot, lunatic, or habitual drunkard, upon the agreement of the general guardian or committee thereof, may be made by the supreme or county court where the property is situated. Notice shall be given to superintendent, etc., of a State hospital where such incompetent is confined.[2]

An action may be maintained to compel the sale of an incompetent's real property in certain cases.[3]

Certain interests of incompetents in real property may be sold, upon petition of the committee, notice to superintendent as above, and an order of the court.[4]

ANNULMENT OF MARRIAGE.—A marriage may be annulled for the cause, existing at the time of the marriage, that one of the parties was an idiot or a lunatic.[5]

Such action may be maintained during the lifetime of the idiot or the continuance of the lunacy, "by any relative who has an interest to avoid the marriage." Such an action may also be maintained by the lunatic after restoration if there has been no free cohabitation thereafter. When no relative brings the action a next friend may upon order of the court, except after restoration of the lunatic.[6]

MISCELLANEOUS PRACTICE PROVISIONS.—The court before swearing an apparently weak-minded witness must ascertain his capacity and the extent of his knowledge.[7]

No person interested in the result may testify to personal transactions with one since become insane against his interest.[8]

Testimony of a witness who has since become insane given on a former trial may be read on a new trial of the same action.[9]

If a justice of the peace becomes insane and is unable to make a return on an appeal, the proceedings before him may be otherwise proved.[10]

[1] Code of Civil Pro., s. 375, 392, 396, 408, 1,291, 1,527.
[2] *Ibid.*, s. 1,590–1,593.
[3] *Ibid.*, s. 2,345–2,347.
[4] *Ibid.*, s. 2,348–2,351, 2,353–2,359, 2,360–2,364.
[5] *Ibid.*, s. 1,743. *cf.* Domestic Relations Law, Laws of 1896, c. 272, Consol. Laws of 1909, c. 14, s. 7, 10.
[6] *Ibid.*, s. 1,746–1,748, 1,755.
[7] *Ibid.*, s. 850.
[8] *Ibid.*, s. 829.
[9] *Ibid.*, s. 830, 2,651; Code of Criminal Pro., s. 8.
[10] *Ibid.*, s. 3,056.

If a notary public becomes insane his original protest of a demand of acceptance or of payment is presumptive evidence.[1]

Personal service of the summons in an action or of a citation against a person judicially declared to be incompetent to manage his affairs for whom a committee has been appointed must be made on the committee and also on the incompetent.[2]

If the defendant is believed to be incompetent though not declared so, the court may by order designate a person on whom service shall also be made.[3]

The same may be done when a committee has been appointed but the court believes him not disinterested; and the court may appoint a general guardian *ad litem* to the exclusion of the committee.[4]

If service on the lunatic will be dangerous it may be dispensed with.[5]

A lunatic or an idiot may be discharged from arrest under civil process as a privileged person in the discretion of the court.[6]

Procedure in Criminal Cases.—In criminal cases "whenever a person in confinement under indictment desires to offer the plea of insanity, he may present such plea at the time of his arraignment, as a specification under the plea of not guilty."[7]

"When the defense is insanity of the defendant the jury must be instructed, if they acquit him on that ground, to state the fact with their verdict. The court must, therefore, if the defendant be in custody, and they deem his discharge dangerous to the public peace or safety, order him committed to the State lunatic asylum until he becomes sane."[8]

After conviction, the defendant may show for cause why he should not be sentenced, that he is insane. If the court believes he is insane the question must be tried, and if the prisoner is found insane he must be confined in the asylum until he recovers.[9]

When the defendant pleads not guilty because of insanity, the court may, instead of proceeding with the trial, appoint a commission of not more than three persons to examine him and report as to his insanity at the time of the commission of the crime.

[1] Code of Civil Pro., s. 924.
[2] *Ibid.*, s. 426, 2,526.
[3] *Ibid.*, s. 427.
[4] *Ibid.*, s. 428; *cf.* s. 2,530–2,531.
[5] *Ibid.*, s. 429.
[6] *Ibid.*, s. 534.
[7] Code of Criminal Pro., s. 336.
[8] *Ibid.*, s. 454.
[9] *Ibid.*, s. 481.

If a defendant in confinement under indictment appears to be, before or after conviction, insane, the court may appoint a like commission (unless he is under sentence of death).

The commission must take the oath, be attended by the district attorney, and call witnesses. Counsel for defendant may take part.[1]

If the finding is that he is insane, the trial must be suspended, and he may be confined.[2]

The costs and expenses are a charge on the county.[3]

CRIMINAL RESPONSIBILITY.—"A person is presumed to be responsible for his acts. The burden of proving that he is irresponsible is upon the accused person, except as otherwise prescribed in this chapter."[4]

"An act done by a person who is an idiot, imbecile, lunatic, or insane is not a crime. A person cannot be tried, sentenced to any punishment or punished for a crime when he is in a state of idiocy, imbecility, lunacy, or insanity so as to be incapable of understanding the proceeding or making his defense."[5]

"A person is not excused from criminal liability as an idiot, imbecile, lunatic, or insane person, except upon proof that, at the time of committing the alleged criminal act, he was laboring under such a defect of reason as:

"1. Not to know the nature and quality of the act he was doing; or

"2. Not to know that the act was wrong."[6]

"No act committed by a person while in a state of voluntary intoxication shall be deemed less criminal by reason of his having been in such condition. But whenever the actual existence of any particular purpose, motive, or intent is a necessary element to constitute a particular species or degree of crime, the jury may take into consideration the fact that the accused was intoxicated at the time, in determining the purpose, motive, or intent with which he committed the act."[7]

"A morbid propensity to commit certain prohibited acts, existing in the mind of a person who is not shown to have been incapable of knowing the wrongfulness of such acts, forms no defense to a prosecution therefor."[8]

[1] Code of Criminal Pro., s. 658.
[2] *Ibid.*, s. 659, 661.
[3] *Ibid.*, s. 662, 662*a*.
[4] Penal Law, s. 815.
[5] *Ibid.*, s. 1,120.
[6] *Ibid.*, s. 1,120.
[7] *Ibid.*, s. 1,120.
[8] *Ibid.*, s. 34.

Crimes Against the Insane.—One person may use violence upon the person of another who is of unsound mind, including persons temporarily or partially deprived of reason, to restrain him from committing an act dangerous to himself or another, or to restrain him for the benefit of his health until legal authority therefor can be obtained.[1]

When through unsoundness of mind, including temporary unsoundness, a woman is incapable of giving consent or does not offer resistance, intercourse is rape.[2]

A minister or magistrate who knowingly solemnizes the marriage of an idiot or insane person is guilty of a misdemeanor.[3]

A person who unlawfully confines or who maltreats an idiot, lunatic, or insane person, or neglects his duty to such person under confinement, is guilty of a misdemeanor.[4]

Maintaining a private insane asylum without a license is a misdemeanor.[5]

The exhibition of any child under sixteen who is insane or idiotic is a misdemeanor.[6]

Exemptions and Disabilities of Insane Persons.—The consent of an insane parent to the adoption of his child is unnecessary.[7]

An idiot or person of unsound mind is not one of those who may transfer real property, make a will, or prosecute an action in person or by attorney.[8]

Idiots, lunatics, and habitual drunkards are excepted from liability to military duty.[9]

Idiots and lunatics are not liable to the village poll tax.[10]

They are exempt from assessment for highway labor in towns.[11]

Insane Emigrants.—The master of every vessel entering the port of New York shall make a report in writing, which shall show whether any passengers are lunatics or idiots, etc.[12]

[1] Penal Law, s. 246.
[2] *Ibid.*, s. 2,010.
[3] *Ibid.*, s. 1,450.
[4] *Ibid.*, s. 1,121.
[5] *Ibid.*, s. 1,122.
[6] *Ibid.*, s. 485, subd. 4.
[7] Domestic Relations Law, s. 111, Laws of 1896, c. 272. Consol. Laws of 1909, c. 14.
[8] Real Property Law, s. 11, Laws of 1896, c. 547; Consol. Laws of 1909, c. 50, Laws of 1867, c. 782, s. 3. Code of Civil Pro., s. 55.
[9] Military Law, Laws of 1898, c. 212, Consol. Laws of 1909, c. 36, s. 110.
[10] Village Law, Laws of 1897, c. 414, Consol. Laws of 1909, c. 64, s. 103.
[11] Highway Law, Laws of 1890, c. 568, Consol. Laws of 1909, c. 25, s. 43.
[12] Laws of 1847, c. 195, s. 1, as amended Laws of 1849, c. 350, s. 1, and Laws of 1851, c. 523, s. 3.

The commissioners of emigration shall inspect the ship and ascertain whether there are any such persons on board, etc.[1]

North Carolina.

[The references are to Revisals of 1905 and of 1907 of North Carolina.]

Inquisition of Lunacy.—On verified petition to the Superior Court of the county where the alleged idiot, inebriate, or lunatic resides, an inquisition may be had on notice to the person by a jury of twelve men. If such person be found an idiot, inebriate, or lunatic, a guardian may be appointed as in cases of orphans.[2]

Who Deemed an Inebriate.—Any person who habitually, whether continuously or periodically indulges in the use of intoxicating liquors, narcotics, or drugs to such an extent as to stupefy his mind, and to render him incompetent to transact ordinary business with safety to his estate, or to render him dangerous to persons or property, or cruel to his family, shall be deemed an inebriate. At the time of inquisition such use of liquors must be of at least one year's standing.[3]

Restoration of Property of Lunatic or Inebriate.—Whenever a lunatic or inebriate shall recover and become capable of managing his own affairs, the court which appointed such guardian is authorized to remove him and restore all the property of such person after an inquisition by a jury of six.[4]

Appointment of Guardian for Lunatic Confined in Asylum.—If any person be confined in any asylum for lunatics and insane persons, the certificate of the superintendent declaring such person to be of unsound mind and memory, sworn to and subscribed before the clerk of the superior court of the county in which such asylum is situated, shall be sufficient evidence to authorize the clerk to appoint a guardian for such person.[5]

Sale of Property of Insane Person.—Property of an insane person may be sold on the order of the clerk of the superior court, when it appears to him that the personal estate has been expended, or is insufficient for the support of the lunatic, and that he is likely to become chargeable on the county. The order shall specify the property to be disposed of.

[1] Laws of 1847, c. 195, s. 3, amended, *ut supra*.
[2] Revisal, s. 1,890.
[3] *Ibid.*, s. 1,892.
[4] *Ibid.*, s. 1,893.
[5] *Ibid.*, s. 1,891.

Such order shall be made upon the petition of the guardian setting forth that such sale is necessary for the support of the insane person, or for the discharge of debts incurred for his maintenance.[1]

SURPLUS INCOME.—Whenever the annual income of the estate of a male lunatic is more than sufficient to support himself and to maintain and educate the members of his family, the clerk of the court may direct that fit and proper advancements be made out of the surplus of such income to children and grandchildren, not being members of his family and entitled to be supported, educated, and maintained out of such estate. In the case of a lunatic widow, the mother of minor children, the surplus of her income may be disposed of in like manner.

Such advancements shall only be made for the better promotion in life of such as are of age or married, and for the maintenance, support, and education of such as are under the age of twenty-one years and unmarried.

In every application for such advancement, the guardian of the insane person and of persons entitled to a distributive share of the estate shall be made parties. Such advancement shall be made in the same equal manner as if made by the insane person himself, and every sum advanced to a child or grandchild shall be an advancement and shall bear interest from the time it was received. The clerk may select and decree advancement to such as most need the same.

The clerk shall withhold advancements from such persons as will probably waste them.[2]

STATE HOSPITALS.—There are three asylums maintained at the expense of the State—one located near Raleigh, another near Morganton, and another near Goldsboro. The first two are chiefly for the accommodation of the white insane, and the State Hospital at Goldsboro is used exclusively for the colored insane of the State. In addition there is a State Hospital for the Dangerous Insane, located in the State's prison.

Each asylum is under the management of a board of nine directors holding office for six years. Three members of the board constitute an executive committee.

Each board directs and manages the affairs of the institution under its charge, and shall appoint a superintendent thereof and

[1] Revisal, s. 1,896, 1,897. [2] *Ibid.*, s. 1,899–1,905.

prescribe his duties. He shall be a skilful physician, educated to his profession, of good moral character, of prompt business habits, and of kindly disposition. His term is six years.

The superintendent appoints one or more assistant physicians, a steward, and, if advisable, a matron.

Each board makes such by-laws and regulations for the government of the institution under its charge as shall be necessary.

Private asylums are required to be licensed.[1]

Admission into State Asylums.—Idiots are not admitted. Priority shall be given to the indigent. An affidavit shall be filed in writing with the clerk of the superior court of the county, or, in an emergency, a justice of the peace by any person alleging the examination of the insane person and the belief that he is insane and a fit subject for admission into the insane asylum. Thereupon the clerk shall, if necessary, cause to be apprehended the person alleged to be insane, examine him, and take the testimony of the county physician, or some other licensed resident physician, and others. If he decides that such person is insane, and no person is willing to give security to restrain the lunatic from committing injuries and to keep and support him, they shall direct such lunatic to be removed to the proper hospital as a patient, and to that end direct a warrant to the sheriff, and at the same time transmit to the proper board of directors the examination of the witnesses and a statement of such facts as the said justice shall deem pertinent to the subject-matter.

If any person becomes suddenly violently insane in another county than that of his residence, the authorities there have jurisdiction to commit. Non-resident insane are to be returned to their State.[2]

Criminal Insane.—The State Hospital for the Dangerous Insane is for persons accused or convicted of crime and insane, or acquitted because of insanity, and insane convicts. Such are committed after an inquest. Discharges may be obtained by writ of habeas corpus.[3]

[1] Revisal, s. 4,542–4,568, 4,600, 4,612.

[2] *Ibid.*, s. 4,572–4,578, 4,582.

[3] *Ibid.*, s. 4,612–4,621.

North Dakota.

[The references are to Revised Codes of North Dakota, 1905.]

Definition.—The term "insane" includes any species of insanity or mental derangement. The term "idiot" is restricted to persons supposed to be actually without mind. No idiot shall be admitted into the hospital for the insane.

Guardians.—The county court, on the verified petition of any relative or friend that any person is of unsound mind, or from any cause is mentally incompetent to manage his property, may cause notice to be given to such alleged insane person of the time and place of hearing.

If, after a full hearing and examination, it appears to the court that the person in question is incapable of taking care of himself and managing his property, it must appoint a guardian of his person and estate.

Powers of Guardian.—Every guardian appointed as provided in the preceding section has the care and custody of the person of his ward and the management of all his estate, until he is legally discharged.[1]

The powers and duties of guardians of insane persons are similar in all respects to those of guardians of minors as prescribed in the Probate Code, chapter 7, articles 1, 3–6.

Restoration of Insane.—Any person who has been declared of unsound mind, or the guardian or relatives or friend of such person, may apply by petition to the county court of the county in which he was so declared to have the fact of his restoration to capacity judicially determined. Notice of a hearing must be given to the guardian of the petitioner, to the husband or wife if there be one, and to the father or mother if living in the county. On the trial the guardian or relative, and in the discretion of the judge, any other person, may contest the right of the petitioner to the relief demanded. Witnesses may be required to appear and testify. If it be found that the petitioner be of sound mind and capable of taking care of himself and of his property, his restoration to capacity shall be adjudged and the guardianship shall cease.[2]

[1] North Dakota Codes, 1905, s. 8,248–8,250. Probate Code, Art. 2.

[2] *Ibid.*, s. 8,251.

COMMISSIONERS OF INSANITY AND COMMITMENT OF THE INSANE.—There is in each county a board of commissioners, consisting of three persons, known as commissioners of insanity. The county judge is a member and chairman of such board, and of the others, one is a lawyer and one a physician.

Such commissioners have cognizance of all applications for admission to the hospital, or for the safe-keeping of insane persons within their counties.

Application for admission to the hospital must be made in writing in the nature of a verified information alleging that the person on whose behalf the application is made is believed to be insane and a fit subject for custody and treatment in the hospital.

The grounds of the information shall thereupon be investigated by the commissioners. They may require that the person be brought before them and examined, and may issue their warrant therefor. They shall hear testimony for and against the application, if any. Any citizen or relative of the alleged insane person may appear by counsel. The commissioners shall appoint some regularly practising physician of the county, who may be of their own number, to make a personal examination touching the truth of the allegations in the information, and the actual condition of such person, and report to them thereon.

On the return of the physician's certificate, the commissioners shall conclude their investigation and find whether the person is insane and a fit subject for treatment and custody in the hospital. If he is found not insane, they shall order his discharge. If insane, they shall issue their warrant authorizing the superintendent of the hospital to receive such person as a patient. If such person cannot be admitted into the hospital at once and cannot with safety be allowed to go at liberty, the commissioners shall require him to be suitably provided for otherwise, until such admission can be had. Such patients may be cared for either as public or private patients. Private patients are those whose relatives or friends will obligate themselves to take care of and provide for them without public charge. In the case of private patients the commissioners appoint a special custodian to restrain and care for the patient. Public patients are cared for at the expense of their county.[1]

RESTORATION TO SANITY.—To secure the release of persons

[1] North Dakota Codes, 1905, s. 1,889–1,896; chapter 137, Laws of 1907.

under confinement as insane a special commission of three persons may be obtained by verified petition and an inquiry had, but not oftener than once in six months.[1]

WRIT OF HABEAS CORPUS.—All persons confined as insane shall be entitled to the benefit of habeas corpus, and the question of insanity shall be decided at the hearing, and if the judge or court shall decide that the person is insane, such decision shall be no bar to the issuing of a writ the second time, whenever it shall be alleged that such person has been restored to reason.[2]

STATE ASYLUM.—The North Dakota Hospital for the Insane is located near Jamestown in the county of Stutsman. It is governed by a board of trustees of five members appointed by the governor.

As to the care and management of the hospital, see sections 1183–1208, article 11 of chapter 15 of the North Dakota Political Code, as amended by chapter 137 of the Laws of 1907.

CRIMINAL INSANE.—When a defendant is acquitted by reason of insanity, the judge may commit him to the State hospital, or to the care of some person.[3]

The insanity of criminals condemned to death may be tried by a jury of six.[4]

A special jury of twelve may be summoned to try a prisoner's sanity before or during his trial, or after conviction.[5]

The provisions as to criminal responsibility are similar to those of the New York Penal Law. The test is whether "at the time of committing the act charged they were incapable of knowing its wrongfulness."[6]

OHIO.

[The references are to Bates' Annotated Ohio Statutes, 1908.]

DEFINITIONS.—The terms "insane" and "lunatic" include every species of insanity or mental derangement; the term "idiot" is restricted to a person foolish from birth, one supposed to be actually without mind.[7]

GUARDIANS OF LUNATICS, IDIOTS, AND IMBECILES.—The probate court, upon satisfactory proof that any person is a luna-

[1] North Dakota Codes, 1905, s. 1,904–1,905.
[2] *Ibid.*, s. 1,906.
[3] *Ibid.*, s. 8,547, 10,064.
[4] *Ibid.*, s. 10,028–10,130.
[5] *Ibid.*, s. 10,207–10,215.
[6] *Ibid.*, s. 8,544, 8,546.
[7] Ohio Statutes, s. 720.

tic, idiot, or imbecile, shall appoint a guardian for such person. No such guardian shall be appointed except upon three days' notice to the person's next of kin residing in the county.

If the wife of such person is competent, the probate judge may appoint her as his guardian.

All laws relating to guardians for minors and their wards and pointing out the duties, rights, and liabilities of such guardians and their sureties, are applicable to such guardians.

In the settlement of accounts of guardians of idiots, imbeciles, or lunatics, no voucher shall be received from or allowed as a credit to the guardian which is signed by such idiot, imbecile, or lunatic.[1]

Management of Real Estate of Ward.—Whenever the sale of the real estate or minerals therein of a ward is necessary for his support or the support of his family or the payment of his debts, or when such sale will be for the interest of such ward or his children, the guardian may sell the same under like proceedings as required to authorize the sale of real estate by the guardian of a minor. But if it be more for the interest of such ward or his children, the probate court upon the petition of the guardian may authorize and sell all such real estate in private, but only at full value.

The guardian may in the same manner as the guardian of a minor be authorized to lease and improve the real estate of his ward, and if the lease extend beyond the time of the restoration of such ward to sound mind or his death, such lease shall terminate on his restoration or death, unless such lease be confirmed by such ward or his legal representatives; but in case of such termination of the lease, the tenant shall have a lien upon the premises for any sum expended by him in making improvements.

The probate court may authorize the guardian to lease the real estate for a term of years or by perpetual lease, with or without the privilege of purchase if it is necessary for the support of the ward or his family, or if such lease will be for the best interest of him or them.

The application for authority to make such a long lease is by petition setting forth the necessary facts.

On filing the petition the same proceedings shall be had as on petition for sale of the real estate of a minor.

[1] Ohio Statutes, s. 6,302–6,304.

The court may prescribe the terms, covenants, conditions, and stipulations of the lease.

The guardian may in like manner obtain authority to improve the real estate.[1]

INSOLVENCY OF LUNATIC.—If the estate of an idiot, imbecile, or lunatic is insolvent, the same shall be settled in like manner and like proceedings may be had as is required by law for the settlement of the insolvent estate of a deceased person.[2]

GUARDIANS OF DRUNKARDS.—The probate court, upon satisfactory proof that any person is incapable of taking proper care of himself or his property by reason of intemperance or habitual drunkenness, shall appoint a guardian of the person and property of such person; and all laws relating to guardians for lunatics, idiots, or imbeciles and their wards are applicable to such guardians.[3]

COMMITMENT OF THE INSANE TO INSANE ASYLUMS.—The State of Ohio is divided into six districts, in each of which is situated a State hospital for the insane. There is also a hospital for the criminal and the dangerous insane, a hospital for epileptics, and the Longview Asylum at Cincinnati for inhabitants of Hamilton County only. Also an Institution for Feeble-minded Youth, to which adults also may be committed.[4]

Each county is entitled to send patients to the asylum of the district in which such county is situated in proportion to the insane population of such county, said number being ascertained by the board of State charities and reported to the superintendent of each of the asylums and the probate judge of the counties.

Patients are admitted on the filing of an affidavit of some resident citizen of the county with the probate judge, alleging that a certain person is insane and that because thereof his being at large is dangerous to the community.

The probate judge shall apprehend such alleged insane person and bring him before him upon a certain day, at which time, if any person disputes the insanity, the probate judge shall issue subpœnas for such persons as are required to be examined on behalf of the alleged insane person, including a physician.

The judge shall proceed to examine the witnesses and attendants, and if he is satisfied that the person is insane, he shall

[1] Ohio Statutes, s. 6,306–6,313 (4).
[2] *Ibid.*, s. 6,314.
[3] *Ibid.*, s. 6,317–6,319.
[4] *Ibid.*, s. 698, 699, 721 (1), 721 (2), 722, 736, 751 (1) *et seq.*, 671–674 f.

cause a certificate to be made out by the medical witness and attendants setting forth such facts as are prescribed by statutes. Upon receiving such certificate he shall forthwith apply to the superintendent of the asylum situated in the district in which such patient resides and at the same time transmit copies of the medical witnesses' certificate, and if the probate judge is advised that the medical superintendent will receive the patient, he shall cause him to be transmitted to the asylum.

When the patient is sent to the asylum, the probate judge shall see that he is supplied with the proper clothing, and if not otherwise furnished, he shall furnish such clothing, which shall be a county charge.[1]

CRIMINAL INSANE.—Insane convicts, dangerously insane persons in other hospitals, and persons accused of crime but not tried because of insanity or acquitted because of insanity are confined in the Lima State Hospital. All except the first two classes must be committed after an inquisition.[2]

OKLAHOMA.

[The references are to Wilson's Revised and Annotated Statutes of Oklahoma, 1903.]

DEFINITION AND RIGHTS OF PERSONS.[3]—"Persons of unsound mind within the meaning of this chapter are idiots, lunatics, and imbeciles."

"A person entirely without understanding has no power to make a contract of any kind, but he is liable for the reasonable value of things furnished to him necessary to his support or the support of his family."

"A conveyance or other contract of a person of unsound mind but not entirely without understanding, made before his incapacity has been judicially determined, is subject to rescission" as provided in the chapter relating to contracts (chapter 15, article 5), that is, diligently, and with return of consideration. After an undisturbed adjudication as insane, a person can make no conveyance or other contract, nor designate any power, nor waive any right; but if actually restored he may make a will.

[1] Ohio Statutes, s. 698–706.
[2] *Ibid.*, s. 721 (1)–721 (25).
[3] *cf.* North and South Dakota, California and Georgia Statutes, after which these are patterned.

A person of unsound mind is civilly liable for wrongs done by him, but cannot be subjected to exemplary damages unless he was capable of knowing the act was wrong.[1]

GUARDIANS.—The probate court has power to appoint a guardian of the person or property or both of an insane resident or non-resident. Any relative or friend may file a verified petition that a person is insane or from any cause mentally incompetent to manage his property. There shall be five days' notice to the person, and he shall if able attend. The probate judge holds the hearing, no jury being provided for.

The guardian has the usual powers.[2]

COMMITMENT.—A person of unsound mind may be placed in an asylum for such persons upon the order of the probate court of his county, the court being satisfied by the oath of two physicians and an examination of his insanity. From his commitment the person, his husband or wife, or relative to the third degree, may appeal to the district court and demand an inquisition before a jury.[3]

The governor contracted with private persons for the care of the Oklahoma insane, according to the requirements of the Illinois and Kansas statutes, prior to the erection of an asylum in the State. The provisions for the appointment of commissioners of the insane and their supervision of the insane were copied from those of the Dakota codes; see South Dakota and North Dakota.[4]

CRIMINAL INSANE.— See Dakota codes, from which these provisions seem to have been taken.

OREGON.

[The references are to Bellinger and Cotton's Annotated Codes and Statutes, 1902.]

JURISDICTION.—The county court has exclusive jurisdiction in the first instance to take the care and custody of the person and estate of a lunatic or habitual drunkard, and to appoint and remove guardians therefor; to direct and control the conduct of such guardians and to settle their accounts.[5]

[1] Oklahoma Statutes, s. 3,910, 3,917–3,921, *cf.* s. 732–733, taken from the Dakota Code.

[2] *Ibid.*, s. 3,815, 3,816, 1,827 *et seq.*

[3] *Ibid.*, s. 3,831. Query if these sections are superseded by the following synopsized sections.

[4] *Ibid.*, s. 3,960–3,985.

[5] Oregon Codes and Statutes, s. 911.

GUARDIANS.—Guardians of insane persons are appointed by the county court upon application of relatives or friends of such insane person, or of any other person residing in the county where such insane person resides. The judge shall cause a notice to be given to the person alleged to be insane of the time and place appointed for the hearing, not less than ten days before such time. If, after a full hearing, it shall appear to the judge that the person in question is incapable of taking care of himself, the judge shall appoint a guardian of his person and estate.[1]

POWERS AND DUTIES.—The guardian so appointed has the care and custody of the person and the management of the estate of such insane person until he shall be legally discharged, and he shall give a bond to the State of Oregon in like manner as guardians of minors.[2]

GUARDIANS FOR SPENDTHRIFTS.—When any person by excessive drinking, gaming, idleness, or debauchery of any kind so spends, wastes, or lessens his estate as to expose himself or family to want or suffering, or the county to expense for the care of himself or his family, the county court shall present a complaint to the county judge setting forth the facts and circumstances of the case and praying to have a guardian appointed for him.

Notice shall be given to such supposed spendthrift of the time and place of the hearing not less than ten days before such hearing, and if after a full hearing it shall appear that the person complained of comes within the description the judge shall appoint a guardian of his person and estate.

A copy of the complaint shall be filed in the office of the county clerk after the order of notice has been issued.

When a guardian shall be appointed for the insane person or spendthrift, the judge shall make an allowance to be paid to the guardian for all reasonable expenses incurred by the ward in defending himself against the complaint.

The guardian so appointed has the care and custody of the person and management of the estate in the same manner as guardians of insane persons.[3]

MANAGEMENT OF ESTATE.—The guardian shall apply the income and profits of the ward's estate for the comfortable and

[1] Oregon Codes and Statutes, s. 5,267–5,268.

[2] *Ibid.*, s. 5,268.

[3] *Ibid.*, s. 5,270–5,274.

suitable maintenance and support of the ward and his family. If they be insufficient for that purpose, the guardian may sell the real estate upon obtaining a license therefor as provided by law.

The estate of the ward shall be appraised by three suitable persons appointed and sworn as required with respect to the inventory of the property of a deceased person.

The county courts upon application of the guardian or any person interested in the estate of the ward may authorize the transfer and reinvestment of the property of the ward.[1]

DEFINITIONS.—The words "insane person" are intended to include every idiot, every person not of sound mind, every lunatic and distracted person; and the word "spendthrift" is intended to include any one who is liable to be put in guardianship on account of excessive drinking, gaming, idleness, or debauchery.[2]

COMMITMENT OF INSANE.—The county judge upon application of any citizen in writing, setting forth that any person by reason of insanity or idiocy is suffering from neglect, exposure, or otherwise, or is unsafe to be at large, shall cause such person to be brought before him and at the same time and place one or more competent physicians, who shall examine the person alleged to be insane or idiotic. If such physician or physicians, after careful examination, shall certify upon oath that such person is insane or idiotic, then the judge, if in his opinion such person be insane or idiotic, shall cause such person to be placed in the insane asylum of the State of Oregon. An appeal shall lie from the county court in such case in the same manner as in all other cases. But no insane or idiotic person shall be committed to the asylum who has friends desiring to provide for his safe-keeping and medical treatment. When the county judge cannot act the sheriff shall notify a justice of the peace to act.[3]

All the proceedings upon such application and the judgment of the court shall be recorded in the records of the county court. When the patient is adjudged insane, the county judge shall make a warrant reciting his findings, the cause of insanity, when the same can be ascertained, together with the name, age, nativity, and present residence of the patient. The expense of sending insane and idiotic persons committed to the asylum shall be paid by the State treasurer out of the fund appropriated for such pur-

[1] Oregon Codes and Statutes, s. 5,275–5,278.

[2] *Ibid.*, s. 5,290.

[3] *Ibid.*, s. 3,619.

pose. The cost of examination and committal shall be first paid by the county and afterward repaid by the State treasurer upon the certificate of the county judge and the audit of the secretary of State by the State treasurer out of funds appropriated for that purpose.[1]

OREGON STATE INSANE ASYLUM.—The State insane asylum is governed by a board of trustees composed of the governor, secretary of State, and the State treasurer. They appoint all officers and employees of the asylum, prescribe their duties, and remove them when in their judgment the good of the public service requires it. They are required to visit the asylum once in three months and keep themselves constantly advised of all items of labor and expense, and the condition of the buildings and property of the asylum. They are required to report biennially to the legislative assembly.

They appoint a medical superintendent who shall serve four years or during good behavior, and on his nomination two or more assistant physicians and other officers according to the requirements of the institution. The superintendent and all the assistant physicians shall reside at the asylum and shall be regular graduates in medicine. Two consulting physicians may also be appointed.

The superintendent is the executive officer of the asylum under the regulations and by-laws of the board of trustees. He has control of the patients, prescribes and directs their treatment, adopts sanitary measures for their welfare, and discharges such as in his opinion have permanently recovered their reason, or such other patient as the best interests of the State and the institution require.[2]

CRIMINAL INSANE.—The court may commit a person acquitted because of insanity to the asylum if he deems it dangerous for him to be at large.[3]

Insanity as a defence must be proved beyond a reasonable doubt.[4]

The provision as to the effect of intoxication is copied from the New York Penal Law.[4]

[1] Oregon Codes and Statutes, s. 3,620.
[2] *Ibid.*, s. 3,610–3,616.
[3] *Ibid.*, s. 1,424.
[4] *Ibid.*, s. 1,393.

Pennsylvania.

[The references are to Stewart's Purdon's Digest, 1903.]

Commission to Inquire into Lunacy or Habitual Drunkenness.—Jurisdiction to issue a commission in the nature of a writ *de lunatico inquirendo*, to inquire into lunacy or habitual drunkenness of any person, is vested in any court of common pleas.

It is to be issued by the court of the county in which the person resides.

The form of the commission is prescribed by statute.

No commission shall be issued, except upon application in writing of a relative by blood or marriage of the person therein named, nor unless such application be accompanied by affidavits of the truth of the facts therein stated.

If the alleged lunatic or habitual drunkard has no such relative, any disinterested person of the same township, ward, or borough may make application to the court for such a commission.

The commission may be directed to any one or more persons.

Upon granting the application for a commission the court shall give such notice to the alleged lunatic or habitual drunkard or his near relatives or friends as it shall deem advisable.

The commissioner or commissioners shall summon such number of persons, not less than six nor more than twelve, to attend upon the inquest as the circumstances of the case may seem to them to require. The testimony taken before such jury shall be filed with the court by the commissioners as part of their report whenever exceptions thereto are filed, and if such exceptions are sustained by the court it shall dismiss the proceedings.

If upon such inquisition it be found that the party is not a lunatic or habitual drunkard and that there was no cause for such application, the judge shall certify the same on such inquisition, and thereupon the party making the application shall be liable for the costs.

Whenever any person shall be found to be insane, the committee of the person or of the estate and also the clerk of the court shall forthwith send to the committee on lunacy, at their office, the statement in writing of the name, age, sex, and residence of the lunatic and the residence of the committee. The

committee on lunacy, or any one or more of the members, may visit and examine the said lunatic or authorize such visiting and examination, and may apply to any court having jurisdiction over the committee, or to the judge of the court of common pleas, to make such orders for the maintenance, custody, or care of the lunatic, and for the care and disposition of the property as the case may require. An appeal to the supreme court lies from any order thus made.

Traverse of the Inquisition.—Any person aggrieved by such inquisition may traverse the same in the court where it is found, but not after three months unless the traverse is specially allowed by the court at a later day.[1]

Appointment of the Committee.—On the return of an inquisition finding the person a lunatic or habitual drunkard, the court may commit the custody and care of the person or estate or of both to such person or persons as they may deem most suitable. A bond shall be given by the person appointed committee of the estate in such sum as the court shall direct, with condition for the faithful performance of the trust and for a due account of all property and funds coming into his hands.[2]

Powers and Duties of the Committee.—The committee, within forty days after undertaking the trust, shall file in the office of the prothonotary of the court a just and true inventory of all personal estate belonging to his ward together with a statement of the real estate.

The committee of the estate of every person found to be a lunatic or habitual drunkard shall have the management of the real and personal estate, and apply so much of the income as is necessary to the payment of the debts and for the support and maintenance of the person and of his family, and for the education of his minor children. If the income is not sufficient, under the direction of the court the committee may apply so much of the principal of the personal estate as is necessary.

Under the direction of the court, the committee may invest the money of the ward in such stocks or securities as are approved by the court. Each committee shall account for the property committed to him once in three years.[3]

[1] Purdon's Digest, p. 2,386–2,392, Title: "Lunatics and Habitual Drunkards."

[2] *Ibid.*, p. 2,393–2,394.

[3] *Ibid.*, p. 2,395–2,397.

SALE OF THE REAL ESTATE OF A LUNATIC.—If the personal estate of a lunatic is not sufficient for the support of the lunatic, the court may authorize the sale of his real estate, upon an application by the committee setting forth a statement or inventory of the real and personal estate, the debts due by the lunatic or habitual drunkard, and an estimate of the amount properly required annually for his support and maintenance and that of his family and the education of his children.

No order shall be granted except upon due notice to the next of kin of the lunatic or habitual drunkard.

Each order for the sale of real estate shall specify the property to be sold, the notice of the sale to be given by the committee, the terms of sale, the amount of security to be given by the committee, and the day on which the order is returnable. Each order for the mortgaging of real estate shall specify the amount to be raised, the property to be mortgaged, the rate of interest, the amount of security to be given by the committee, and the day on which the order is returnable.

No sale or mortgage shall be confirmed by the court until the committee have given security for the faithful application of the proceeds.

If the sale or mortgage be confirmed by the court, the committee shall execute such sale or mortgage according to the terms of the contract.

On the application of the committee the court may authorize the sale of timber standing upon the lands of such lunatic or drunkard.[1]

LUNATIC ASYLUMS.—The board of public charities has the supervision of all houses or places in which any person of unsound mind is detained, whenever the person having charge of the lunatic receives any compensation for the custody, control, or attendance of such lunatic.

The board shall appoint a committee of five to act as the committee on lunacy. The two professional members, one a physician and the other a lawyer, shall be members of that committee. The committee on lunacy shall examine and report annually to the board the condition of the insane in the State and the management and conduct of the hospitals, public and private almshouses, and all other places in which the insane are kept for care and treatment or detention.

[1] Purdon's Digest, p. 2,397–2,399.

The board shall have power to ordain rules and regulations relating to the licensing of all places where persons are detained as lunatics or of unsound mind, and for the insuring of proper treatment of persons so detained, and as to the forms to be observed in the commitment, transfer of custody, and discharge of all lunatics other than those committed by order of a court of record.[1]

The asylums are, the Pennsylvania State Lunatic Hospital, the Western Pennsylvania Hospital, the Warren State Hospital, the Asylum for Chronic Insane, and the Homeopathic State Hospital for the Insane.[2]

Admission to Insane Asylums.—No person shall be received as a patient in any insane asylum without a certificate signed by at least two physicians that they have examined separately the person alleged to be insane, and thoroughly believe that the person is insane and that the disease is of a character requiring that the person should be placed in a hospital or other establishment where the insane are detained for care and treatment, and that they are not related by blood or marriage to the person alleged to be insane, nor in any way connected with the hospital or other establishment.

There shall be delivered at the time of the admission of the patient a written statement signed by the person at whose instance the insane person has been removed and detained, containing the name, age, residence, occupation, parents if living, husband or wife, children, brothers and sisters, and residence of each of these persons; if not more than one of these classes is known the names and residence of such of the next degree of relatives as are known, a statement of the time at which the insanity has been supposed to exist, and the circumstances that induced the belief that insanity exists, and the name and address of all medical attendants of the patient during the past two years. A certificate of the physician and a statement furnished at the time of the reception of the patient shall be forwarded by mail to the committee on lunacy within seven days from such reception.

Any physician designated by the lunatic or any member of his family or near friend shall be permitted at all reasonable hours to visit and examine the patient. All patients shall be

[1] Purdon's Digest, p. 2,362–2,363, Title: "Lunatic Asylums."

[2] *Ibid.*, p. 2,370–2,385.

given reasonable opportunity and furnished with materials for communicating with any person without the building. They shall have the unrestricted privilege of addressing communications, not oftener than once a month, to any member of the committee on lunacy.[1]

COMMITMENT OF INSANE PERSONS BY THE COURT.—Insane persons may be placed in hospitals by the order of any court, and a statement in writing of any respectable citizen that a certain person is insane and that his welfare or that of others requires his restraint. The judge shall thereupon appoint immediately a commission to inquire into the report upon the facts of the case. The commission shall be composed of three persons, one a physician and one a lawyer. In their inquisition they shall hear such evidence touching the merits of the case as well as the statements of the party complained of. If in their opinion it is a suitable case for confinement, the judge shall issue his warrant for such disposition of the insane person as will promote the object desired.

If the commission report that it is not a suitable case for confinement, the petitioner shall be liable for all costs. If the commission report the case a suitable one for confinement, and it shall appear that the lunatic has real or personal property, such property shall be liable to all costs.[2]

VOLUNTARY PATIENTS.—Persons voluntarily placing themselves in asylums, who may be suffering from nervous diseases threatening mental disorder, may be received for one month or less by agreement.[3]

RHODE ISLAND.

[The references are to General Laws of Rhode Island, 1896.]

DEFINITION.—"Insane person" includes every idiot, person of unsound mind, lunatic and distracted person.[4]

RESTRAINT OF INSANE PERSONS.—Whenever complaint in writing and under oath shall be made to any justice or clerk of the district court that any person within the county is insane so as to be dangerous to the peace or safety of the people of the State, or so as to render his restraint and treatment necessary for

[1] Purdon's Digest, p. 2,364–2,366.
[2] *Ibid.*, p. 2,358–2,361.
[3] *Ibid.*, p. 2,367.
[4] Rhode Island General Laws, 1896, p. 125.

his own welfare, such justice or clerk shall cause such person to be arrested and brought before some district court for examination relative to such complaint. When the insane person cannot be examined in open court such examination may be held at such times and places as shall be most conducive to the health and comfort of the person to be examined.

If the court on such examination adjudge such complaint to be true, it shall commit such person to the Butler hospital for the insane, or to the State asylum for the insane, to be detained until upon instruction and examination he shall be declared to be restored to soundness of mind.

The warrant of commitment shall state the town in which such lunatic or mad person was arrested.

The costs shall be paid out of the property of the lunatic if he have any, otherwise in the first instance by the State until the liability of some town in the State for the maintenance of such person is established.

Commissioners may be appointed on petition under oath to inquire into the condition of the insane person and to report all facts connected with the case, together with their opinion whether such person if insane should be placed in such hospital or State asylum.[1]

Examination of Confined Insane Person.—On petition of any person confined in an insane asylum or of any person on his behalf to a justice of the supreme court setting forth that such persons confined therein is not insane and is unjustly deprived of his liberty, such justice shall issue a like commission as provided for the commitment of the insane person for the purpose of inquiring into the condition of such person.

The person confined as insane shall have the right to confer with counsel, to produce evidence, and to be present at the inquisition. The petitioner or his counsel may examine the insane person at the place where he is confined. The commissioners shall make a personal examination of such insane person at the place where confined without the presence of the superintendent or any other person connected with the institution, but no person detained as insane shall be taken from the institution without an order of the supreme court.

Justices of the supreme court may either confirm or disallow

[1] Rhode Island General Laws, 1896, p. 278 *et seq.*

the report of the commissioners and order the recommitment or discharge of such person, or dismiss the petition altogether, as the facts shall seem to require.[1]

APPOINTMENT OF GUARDIAN.—Whenever any idiot or lunatic or person of unsound mind, or any person who from excessive drinking, gaming, idleness, or debauchery of any kind, or from want of discretion in managing his estate, shall be likely to bring himself or family to want or to render himself or family chargeable, the court of probate shall have the right to appoint a guardian of the person and estate of such person.

The guardian of any habitual drunkard shall have the right to commit the ward to any curative hospital either within or without this State, until he is cured of his drunkenness, but not exceeding six months at any one time. The estate of the ward shall be chargeable with the expenses incident to such committal and custody. The provisions in regard to the guardianship of minors are also applicable to the guardianship of insane persons and habitual drunkards.[2]

SOUTH CAROLINA.

[The references are to the South Carolina Codes, 1902.]

GUARDIANS.—The judge of probate has jurisdiction in cases of idiocy and lunacy, and of the appointment of guardians of insane and idiotic persons, and persons *non compotes mentis*.[3]

STATE HOSPITAL FOR INSANE AND COMMITMENTS.—The governor shall appoint five regents for the State hospital for the insane, at Columbia, who hold office for six years. The regents have general control of the hospital.[4]

The hospital admits only insane persons, by which are meant those dangerously insane, whose disease is of a more or less permanent character, not transient like delirium, and who are unable to transact their ordinary business. Preference is given to recent, curable cases over chronic cases, idiots, epileptics, dipsomaniacs, etc. Persons insane from the use of alcohol or drugs are received as paying patients only.[5]

[1] Rhode Island General Laws, 1896, s. 15–18.

[2] *Ibid.*, p. 637; c. 196.

[3] Code of Civil Procedure, s. 37–38. The jurisdiction is not exclusive, but is concurrent with that of the court of common pleas. Walker *v.* Russel, 10 S. C., 82. But the probate court cannot grant leave to traverse an inquisition in lunacy; that can only be done in the court of common pleas. Walker *v.* Russel, *supra*.

[4] Civil Code, s. 2,247–2,248.

[5] *Ibid.*, s. 2,250, 2,268.

A relative, friend, or other citizen interested may apply to the judge of probate, who may investigate, and, if convinced that the application is a just one, commit, upon the certificate of two physicians that the patient is an epileptic, idiot or lunatic, incurable at home, and violent or dangerous.[1]

At the same time the judge of probate must ascertain the patient's financial condition to determine whether he shall be admitted as a paying patient, or as a beneficiary patient.[2]

The superintendent of the hospital may receive violent and dangerous patients temporarily, on the certificate of two physicians.[3]

Upon the certificate of two regents and the physician in charge, the judge of probate may appoint a committee of the estate of a patient committed to the hospital.[4]

Discharges are regulated by the regents.[5]

Criminal Insane.—Any judge of the circuit court may send to the State hospital any person charged with a criminal offence who shall upon the trial prove to be *non compos mentis*. If he has an estate he must support himself therein.[6]

South Dakota.

[The references are to Revised Codes of South Dakota, 1903.]

Definition.—The term "insane" includes any species of insanity or mental derangement. The term "idiot" is restricted to persons supposed to be naturally without mind. No idiot shall be admitted into the hospital for the insane.[7]

Guardians.—The county court, on the verified petition of any relative or friend that any person is insane, or from any cause is incompetent to manage his property, may cause notice to be given to such alleged insane person of the time and place of the hearing, and if such person is able to attend, he must be produced before him on the hearing.[8]

If, after a full hearing and examination, it appears to the judge of the court that the person in question is incapable of

[1] Civil Code, s. 2,251–2,253, 2,263. See also Code of Civ. Proc., s. 70.
[2] *Ibid.*, s. 2,255.
[3] *Ibid.*, s. 2,253.
[4] *Ibid.*, s. 2,262.
[5] *Ibid.*, s. 2,267.
[6] *Ibid.*, s. 2,264.
[7] South Dakota Political Code, s. 2,829.
[8] Probate Code, s. 379.

taking care of himself and managing his property, he must appoint a guardian of his person and estate.[1]

Powers of Guardian.—Every guardian appointed as provided in the preceding section has the care and custody of the person of his ward and the management of all his estate, until he is legally discharged.[2]

The powers and duties of guardians of insane persons are similar in all respects to those of guardians of minors, as prescribed in the Probate Code, chapter 13, articles 1, 3–7.

Restoration of Insane.—Any person who has been declared insane, or the guardian, or any relative within the third degree, or any friend, may apply by verified petition to the county court of the county within which he was declared insane, to have the fact of his restoration to capacity judicially determined. Notice of the trial must be given to the guardian of the petitioner, to the husband or wife if there be one, and to the father or mother, if living in the county. On the trial the guardian or relative, and, in the discretion of the judge, any other person, may contest the right of the petitioner to the relief demanded. Witnesses may be required to appear and testify. If it be found that the petitioner be of sound mind and capable of taking care of himself and his property, his restoration to capacity shall be adjudged and the guardianship shall cease.[3]

Commissioners of Insanity and Commitment of the Insane.—There is in each county a board of commissioners, consisting of three persons, known as commissioners of insanity.

The county judge is a member and chairman of such board; and of the others, one is a lawyer and one a physician.

Such commissioners have cognizance of all applications for admission to the hospital, or for the safe-keeping of insane persons within their counties.

Application for admission to the hospital must be made in writing in the nature of a verified information alleging that the person on whose behalf the application is made is believed to be insane and a fit subject for custody and treatment in the hospital. The grounds of the information shall thereupon be investigated by the commissioners. They may require that the person be brought before them and examined, and may issue their warrant

[1] Probate Code, s. 380.
[2] *Ibid.*, s. 381.
[3] *Ibid.*, s. 382.

therefor. They shall hear testimony for and against the application, if any. Any citizen or relative of the alleged insane person may appear by counsel. The commissioners shall appoint some regularly practising physician of the county, who may be of their own number, to make a personal examination touching the truth of the allegations in the information, and the actual condition of such person, and report to them thereon.

On the return of the physician's certificate the commissioners shall conclude their investigation and find whether the person is insane and a fit subject for treatment and custody in the hospital. If he is found not insane, they shall order his discharge. If insane, they shall issue their warrant authorizing the superintendent of the hospital to receive such person as a patient.

If such person cannot be admitted into the hospital at once, and cannot with safety be allowed to go at liberty, the commissioners shall require him to be suitably provided for otherwise, until such admission can be had. Such patients may be cared for either as public or private patients. Private patients are those whose relatives or friends will obligate themselves to take care of and provide for them without public charge. In the case of private patients the commissioners appoint a special custodian to restrain and care for the patient. Public patients are cared for at the expense of their county.[1]

Restoration to Sanity.—To secure the release of persons under confinement as insane, a special commission of three persons may be obtained by verified petition and an inquiry had, but not oftener than once in six months.[2]

Writ of Habeas Corpus.—All persons confined as insane shall be entitled to the benefit of *habeas corpus*, and the question of insanity shall be decided at the hearing, and if the judge or court shall decide that the person is insane, such decision shall be no bar to the issuing of a writ the second time, whenever it shall be alleged that such person has been restored to reason.[3]

State Asylum.—The South Dakota State hospital for the insane is located near the city of Yankton. It is governed by the State board of charities and corrections. As to the care and management of the hospital, see article 1 of chapter 9 of the South Dakota Political Code.

[1] Political Code, s. 2,806–2,817.
[2] *Ibid.*, s. 2,824, 2,825.
[3] *Ibid.*, s. 2,826.

CRIMINAL INSANE.—When a defendant is acquitted by reason of insanity, and the court deems his discharge dangerous, it may order him committed to the State hospital, or to the care of some person (or to the care of the sheriff), until he becomes sane.[1]

The insanity of a criminal condemned to death may be tried by a jury of twelve.[2]

A special jury of twelve may be summoned to try a prisoner's sanity, when his trial is called or after conviction.[3]

The provisions as to criminal responsibility are similar to those of the New York Penal Law. The test is whether "at the time of committing the act charged they were incapable of knowing its wrongfulness."[4]

TENNESSEE.

[The references are to Shannon's Code of Tennessee, 1896, and Supplement, 1903.]

DEFINITION.—The terms "lunatic," "insane," "*non compos mentis*," include all persons of unsound mind.[5]

JURISDICTION.—Jurisdiction over the persons and estates of idiots, lunatics, and other persons of unsound mind is vested in the county and chancery courts.[6]

INQUISITION.—Upon information made to the county court that any idiot or lunatic resides within the jurisdiction thereof, the court shall order the sheriff to summon a jury of twelve freeholders to ascertain by inquisition the idiocy or lunacy and the property and estate of the idiot or lunatic and make return thereof to the court.[7]

Witnesses may be subpœnaed and are subject to the penalties and entitled to the privileges of other witnesses.[8] If the person is not declared a lunatic, the person on whose application the inquisition is issued is liable for costs. Otherwise they are paid from the lunatic's estate.[9]

Upon the return of the jury that the person is an idiot or lunatic and that he has property, the court shall appoint a guardian for the person and property of such idiot. If the idiot or lunatic has no property or not sufficient for his maintenance,

[1] Penal Code, s. 19; *cf.* Code of Criminal Procedure, s. 418.
[2] Code of Crim. Proc., s. 464–468.
[3] *Ibid.*, s. 543–552.
[4] Penal Code, s. 16, 17.
[5] Code of Tennessee, s. 62.
[6] *Ibid.*, s. 5,451.
[7] *Ibid.*, s. 5,452.
[8] *Ibid.*, s. 5,455.
[9] *Ibid.*, s. 5,456.

he may be let out for the term of one year to the lowest bidder as other poor persons, or be otherwise provided for as the court may direct.

If let out to the lowest bidder, bond and sufficient security as prescribed by the court shall be taken for the safe-keeping, providing sufficient diet, washing and apparel, and proper treatment for the term of letting.[1]

Inquisition in the Chancery Court.—The application to the chancery court shall be by petition verified by affidavit setting forth the facts in regard to the person and property of the supposed idiot or lunatic.

No application shall be made unless the value of the property exceeds five hundred dollars.

The chancellor shall direct the issuance of a writ of inquisition upon the giving of a bond by the petitioner conditioned to pay costs and all such damages as the defendant may sustain in consequence of the petitioner having wantonly and maliciously instituted proceedings. He may make such order for the presence and examination of the person as he may think proper.

The jury consists of twelve freeholders, and are required to ascertain by their verdict whether the defendant be an idiot or lunatic or person of unsound mind.

Notice of the time and place of the inquest shall be given to the alleged lunatic at least five days previous to the time of hearing; if the jury find the person to be a lunatic, the verdict shall ascertain the value of the estate and of what it consists and who are the next of kin of the insane person.

Upon such finding the clerk shall appoint a guardian to take care of the estate and person of the insane person. Upon motion after the return of the inquisition the verdict of the jury may be set aside and the chancellor may thereupon order another inquest to be held.

If the jury disagree, the chancellor may in his discretion order another inquest or decide the case himself upon the testimony returned and such other testimony as may be offered.[2]

Powers of Guardian.—The guardian may upon the coming of age or marriage of the child of the confirmed lunatic make

[1] Code of Tennessee, s. 5,457–5,459. These provisions as to letting out are survivals of an obsolete conception of the duty of the state to insane persons. They were enacted by chapter 41 of the Laws of 1797.

[2] *Ibid.*, s. 5,461–5,497.

such settlement upon such child as the situation of the estate, the condition of the lunatic and his wife, and other circumstances may render reasonable and just. The guardian may apply in such case to the chancellor for direction.

The real and personal property of a person laboring under confirmed mental unsoundness may be portioned by the court among his children or descendants as in case of death and intestacy, such portion to be charged as an advancement.

The property of a person of unsound mind may be sold upon the petition of the guardian if it appear manifestly for the interest of such person, and the proceeds shall be disposed of by the court in such manner as best to promote the interests of the owner. Guardians of lunatics, idiots, and other persons of unsound mind shall be punishable for the same abuses, mismanagements, neglects, failures, and other offences as guardians of minors and in the same manner.[1]

Restoration to Sanity.—Restoration to sanity may be similarly inquired into, on petition accompanied by the certificate of two physicians, presented to the county court, through a jury of twelve, but not oftener than once a year;[2] or by *habeas corpus*.[3]

Hospitals for the Insane.—The Tennessee hospitals for the insane at Nashville, Knoxville, and Bolivar, are governed by boards of five trustees each.

Each board shall appoint a superintendent of the hospital who shall be a skilful physician of unblemished moral character, of enlightened and thorough professional education, of prompt business habits, and of humane and kind disposition. He shall be a married man, and with his family shall reside constantly in the institution.

It shall be his duty to exercise a general superintendence over all matters relating to the hospital, to visit the patients therein at least twice a week, to call extraordinary meetings of the board whenever it may be deemed necessary, to report to the trustees annually the number of patients admitted in the hospital, the date of admission of each patient, the degree and kind of insanity with which each patient is afflicted, the length of time supposed to have been afflicted before admission, the previous occupation,

[1] Code of Tennessee, s. 5,478–5,490.
[2] *Ibid.*, s. 5,491–5,499.
[3] *Ibid.*, s. 5,500 *et seq.*

age, and habits of each patient, the names and addresses of those discharged, and the situation of each when discharged, and such other particulars as he may deem necessary.[1]

Admission of Patients.—Insane persons may be placed in the hospitals by their legal guardians or by their relatives or friends in case they have no guardian, or by the justice of the peace if the person be proved to be insane.

Non-paying patients may be admitted to the number of one to every eighteen hundred of the population of each county, upon a statement in writing of some respectable citizen of the county, filed with a justice of the peace, to the effect that the person is insane and that his insanity is of less than two years' duration, that he is in needy circumstances, and is a citizen of the State of Tennessee.

The justice shall issue subpœnas for persons named as witnesses and such other persons as he may think proper. If after such inquest the justice is satisfied of the truth of the allegations contained in the statement, he shall require the medical witnesses to certify that they have examined the person alleged to be insane and as to his condition. If satisfied that the person alleged to be insane is insane, the justice shall certify to such fact and transmit to the clerk of the county court a certificate of the proceedings had. The clerk shall file such certificate in his office and transmit a copy of the same to the superintendent of the hospital, accompanied with an application for the admission of the patient therein named. Upon the receipt of the application the superintendent shall notify the clerk as to when the patient can be received.

Paying patients are also admitted.[2]

Criminal Insane.—The court may commit persons arraigned, who are found by the jury to be presently insane, except those accused of misdemeanor or felonious assaults, or those who are admissible to the hospitals under the general laws of commitment.[3]

[1] Code of Tennessee, s. 2,578–2,599.
[2] *Ibid.*, s. 2,613–2,618, 2,622.
[3] *Ibid.*, s. 2,631–2,633.

TEXAS.

[The references are to Sayles' Texas Civil Statutes, 1897 (1900), and Supplement, 1906; and Willson's Texas Criminal Statutes, 1902.]

DEFINITIONS.—Persons of unsound mind are idiots, lunatics, or insane persons.

An habitual drunkard is one whose mind has become so impaired by the use of intoxicating liquors or drugs that he is incapable of taking care of himself or his property.[1]

JURISDICTION.—The county court has power to appoint guardians of persons of unsound mind and habitual drunkards, settle the accounts of such guardians, and transact all business pertaining to the estates of such persons.

The district court has appellate jurisdiction over the county court in all matters of guardianship, and original jurisdiction under such regulations as may be prescribed by law.[2]

APPOINTMENT OF GUARDIANS.—Proceedings for the appointment of guardians of the persons, or estate, or of either, of persons of unsound mind or habitual drunkards shall be commenced in the county where such person of unsound mind or habitual drunkard resides.

The nearest of kin of such person who is not disqualified shall be entitled to the guardianship, and where two or more are equally entitled the guardianship shall be given to the one or the other according to circumstances, taking into consideration the interests of the ward alone. If such ward have a husband or wife who is not disqualified, such husband or wife shall be entitled to the guardianship in preference to any other person.

Notice of the application of the appointment of a guardian must be given to the alleged person of unsound mind or habitual drunkard. Before appointing a guardian the court must be satisfied that the person for whom the guardian is to be appointed is a person of unsound mind or a habitual drunkard, that the court has jurisdiction in the case, and that the person to be appointed guardian if entitled to guardianship is not disqualified, or in other cases that he is a proper person to act.[3]

Guardians of persons of unsound mind and habitual drunk-

[1] Texas Civ. Stat., a. 2,553, 2,554.
[2] *Ibid.*, a. 2,550–2,551.
[3] *Ibid.*, a. 2,566, 2,583, 2,587, 2,588, 2,594.

ards are required to take the oath and give a bond, and their powers and duties with regard to the estate of their wards are the same as guardians of minors.[1]

Proceedings for the Appointment of Guardians.—Upon information given to the judge of the county court that any person is of unsound mind or is an habitual drunkard and is without a guardian the judge, if satisfied that there is good cause, shall issue a warrant to the proper officer commanding such person to be brought before him at a time and place to be named in such warrant.

The information shall be in writing stating the name of the person charged, and that such person is of unsound mind or is an habitual drunkard; such information shall be subscribed and sworn to by the informant.

A jury shall be empanelled to try the case and decide whether such person is of unsound mind or is an habitual drunkard.

The case shall be conducted in the name of the county as plaintiff and the person against whom the information is filed as defendant, and the proceedings and trial therein shall be governed in the same way as in ordinary suits in the county court, unless otherwise provided.

If it be found that the defendant is of unsound mind or an habitual drunkard, the court shall immediately appoint a guardian of the person and estate of such defendant.[2]

When Ward is Furiously Mad.—If any person shall be furiously mad, or so far disordered in his mind as to endanger his own person or the person or property of others, it shall be the duty of the guardian to confine him in some suitable place until the first regular term of the county court, when the court shall make such order for the restraint, support, and safe-keeping of such ward as circumstances may require. If any such person is not so confined, any magistrate may cause him to be apprehended and employ any person to confine him in some suitable place until the county court shall make further order thereon.[3]

Maintenance of Insane Persons.—Where the person of unsound mind or habitual drunkard has no estate of his own, he shall be maintained: 1. By the husband or wife, if any, if able to do so. 2. By the father or mother, if able to do so. 3. By

[1] See Texas Civ. Stat., chap. 8, Title 51.

[2] *Ibid.*, a. 2,735–2,740.

[3] *Ibid.*, a. 2,745, 2,746.

the children and grandchildren, if able to do so. 4. By the county in which such person has his residence.

The expense attending the confinement shall be paid by the guardian out of the estate of the ward, if he has any, and if not, by the person bound to provide for him; if not so paid, the county shall be chargeable with such expense.[1]

LUNATIC ASYLUMS.—The general control, management, and direction of Texas asylums for the insane are vested in the boards of managers, consisting of five members appointed by the governor. There is also a colony for epileptics, and an asylum for the treatment of hydrophobia.

They shall have original jurisdiction and control of all the property and business of the asylums. They may make by-laws and regulations for the government of the institutions, determine the salary and wages of officers, discharge officers, employees, or patients, appoint assistant physicians, suitable matrons and apothecary, examine the accounts and vouchers of the superintendent, exercise a careful supervision over the general operations of the expenditures of the asylums, and direct the manner in which their revenue shall be disbursed.

A committee of the board shall visit each asylum once every month, a majority quarterly, and the whole number once a year.[2]

POWERS OF THE SUPERINTENDENT.—The superintendent shall be elected by the board of managers of the asylum. He shall be a married man, a skilful physician, and experienced in the treatment of insanity. He shall reside at the asylum, and devote his whole time to the duties of his office.

He shall be the chief executive and medical disbursing officer of the institution, and, subject to the by-laws, shall have general care and control over everything connected therewith. With the consent of the board of managers he shall employ such officers and other persons as may be required. He shall keep a register of all patients received into the asylum and discharged therefrom.[3]

ADMISSION OF PATIENTS INTO ASYLUM.—All persons adjudged insane and ordered confined by a court of competent jurisdiction may be admitted into an asylum. This class shall be known as public patients.

All persons certified to be insane by some respectable physi-

[1] Texas Civ. Stat., a. 2,747, 2,748.
[2] *Ibid.*, a. 88–96.
[3] *Ibid.*, a. 97–105.

cian under the regulations prescribed by statute shall be received and shall be known as private patients.

Before any person can be received as a private patient, the guardian, or parent, or some near relative or other person interested in him, must present a written request to the superintendent for his admission, setting forth such facts as may be required by the superintendent, which written request must be under oath of the party presenting it, and be accompanied with the affidavit of the physician certifying to the insanity.

Such application must also be accompanied by a certificate of the county judge that the physician certifying to the insanity of the person is a reputable physician in regular practice. All private patients shall be kept and maintained at the asylum at their own expense, or the expense of their relatives or others. All indigent public patients shall be kept and maintained at the expense of the State.[1]

Judicial Proceedings in the Case of Lunacy.—Upon information in writing and under oath to the county judge that any person in his county is a lunatic, and that the welfare of himself or of others requires that he be placed under restraint, or that such lunatic is a convict confined in the State penitentiary, and if such county judge shall believe such information to be true, he shall issue his warrant for the apprehension of such person and fix a day for a hearing. A jury of six competent jurors shall be summoned and duly examined and sworn.

Evidence shall be produced and heard, and the county judge shall submit to the jury the question as to whether the defendant is of unsound mind and if he should be placed under restraint.

If this question be decided in the affirmative, the verdict of the jury shall state the age and nativity of the defendant, the number of attacks of insanity he has had, and if insanity is hereditary in the family of defendant or not.

Judgment shall thereupon be entered adjudging the defendant to be a lunatic and ordering him to be committed to the lunatic asylum for restraint and treatment.[2]

Criminal Insane.—Insanity after conviction for crime is tried by a special jury. If found insane, the person may be sent to an asylum upon proceedings as in other cases.[3]

[1] Texas Civ. Stat., a. 112–127.
[2] *Ibid.*, a. 128–130; (Supp.), 131–135.
[3] Texas Crim. Stats., a. 982–995.

UTAH.

[The references are to Revised Statutes of Utah, 1907.]

DEFINITIONS.—The words "insane person" include idiots, lunatics, distracted persons, and persons of unsound mind.[1]

In the statutes relating to the appointment of guardians, the phrases "incompetent," "mentally incompetent," and "incapable" include any person who though not insane is from any other cause, unable, unassisted, to properly care for himself and his property, etc.[2]

GUARDIANS OF INSANE AND INCOMPETENT PERSONS.—The district court of each county may when it appears necessary appoint guardians for the persons and estates of the insane or incompetent, on the petition of a relative or friend, after such notice of the time and place of hearing as the court may direct to the person supposed to be insane or incompetent and to such other person as the court may direct.[3]

Such guardian has the usual powers and duties.[4]

RESTORATION TO SANITY.—The guardian may be discharged upon the petition of the person or any relative within the third degree or any friend. Notice shall be given to the guardian, the husband or wife, if any, and the father or mother, if living within the county. There must be a hearing, and testimony may be taken.[5]

INSANE ASYLUM AND COMMITMENTS.—The board of State Insane Asylum Commissioners consists of the governor, State treasurer, and State auditor. This board has supervision and control of all insane persons in the State, wherever confined. It appoints the medical superintendent.[6]

The judges of the district courts have cognizance of all applications for admission to the State asylum, or for safe-keeping within their respective districts. There must be a verified information showing that it is believed by the informant that the person is insane and a fit subject for custody and treatment in the asylum, and his residence. The judge then holds an inquisition, summoning witnesses, including two physicians. The inquisition and proceedings before the judge are substantially as in North and South Dakota, *q. v.*[7]

[1] Utah Rev. Stats., s. 2,498, subd. 16.
[2] *Ibid.*, s. 4,001.
[3] *Ibid.*, s. 4,000; *cf.* s. 2,181.
[4] *Ibid.*, s. 4,003–4,019.
[5] *Ibid.*, s. 4,002; *cf.* s. 2,190.
[6] *Ibid.*, s. 2,153–2,170.
[7] *Ibid.*, s. 2,171–2,187.

When room is lacking at the asylum, patients shall have precedence in the following order: 1. Cases of less than one year's duration; 2, chronic cases of more than one year's duration, presenting the most favorable prospects for recovery; 3, those for whom application has been longest on file. When cases are equally meritorious the indigent are to be preferred.[1]

CRIMINAL INSANE.—The insanity of criminals condemned to death is tried by a special jury of twelve.[2]

Any person not indicted or acquitted because of insanity, or who becomes insane during his trial or when brought up for sentence, shall be sent to the State insane asylum, if the judge deems his freedom a menace to public quietude, upon being found insane by a special jury.[3]

VERMONT.

[The references are to Public Statutes of Vermont, 1906.]

DEFINITIONS.—The words "insane person" shall include every idiot, *non compos*, lunatic, and distracted person.[4]

The word "spendthrift" includes every person who is liable to be put under guardianship on account of excessive drinking, gaming, idleness, or debauchery.[5]

APPOINTMENT OF GUARDIAN.—The probate court may appoint guardians of insane persons or spendthrifts, including an insane married woman abandoned by her husband without means, or any insane married woman having real or personal estate, or any person mentally incapable of taking care of himself or his property, on the application of a relative or friend, or of the overseer of the poor of the town in which the person resides or is chargeable, representing to the court that such person is insane and incapable of taking care of himself, and praying that a guardian be appointed.

The court shall fix a time for considering the application, notice of which shall be given to the alleged insane person or spendthrift at least twelve days before the time set.

The court shall investigate the case and make such decree in the premises as appears just. If a guardian is appointed, the

[1] Utah Rev. Stats., s. 2,191.
[2] *Ibid.*, s. 4,932–4,935.
[3] *Ibid.*, s. 5,052–5,061.
[4] Pub. Stats., s. 91, sub. 7.
[5] *Ibid.*, s. 3,138.

cost of the ward in defending against the application shall be paid out of the ward's estate.[1]

Powers of Guardians.—Guardians shall, until they are legally discharged, have the possession and management of the estates of their wards and the care and custody of the persons of their wards, unless otherwise ordered by the court, and of such members of the families of their wards as are dependent upon them for support, education, or employment, unless they have other guardians.[2]

A married woman may be appointed guardian of her husband, or of any other person, and when so appointed, shall have the same rights, powers and privileges, and be subject to the same liabilities, as if she were unmarried.[3]

The general provisions applicable to the care and management of the estates of minors are also made applicable to the guardians of insane persons and spendthrifts.

The estates of such wards are controlled subject to the direction of the probate court, and no disposition thereof can be made except upon the order of such court.[4]

Insane Poor.—Insane persons in any town destitute of the means to support themselves, and having no relatives bound by law to support them, and having no legal settlement in any town, shall be supported by the State at the insane asylum.[5]

The facts shall be determined by the probate court, which may order the person removed to an insane hospital.[6]

Supervision of the Insane.—The governor shall appoint biennially one of three supervisors of the insane who shall hold their offices for six years. Two of such supervisors shall be physicians, and none of them shall be a trustee, superintendent, employee, or other officer of an insane asylum in the State.

The supervisors shall visit the Vermont hospital for the insane and the Brattleboro Retreat as often as occasion requires, and one member as often as once a month, and also any other place where insane persons are confined in the State, at their discretion. They shall examine into the condition of the asylums in such other places, the management and treatment of the patients therein, their physical and mental conditions and medical treatment; form a careful opinion of the patients, apart from

[1] Pub. Stats., s. 3,159–3,163.
[2] *Ibid.*, s. 3,169–3,170.
[3] *Ibid.*, s. 3,070.
[4] *Ibid.*, s. 3,171–3,223.
[5] *Ibid.*, s. 3,715.
[6] *Ibid.*, s. 3,716–3,718.

the officers and keepers, and investigate the cases that in their judgment require special investigation, and particularly ascertain whether persons are confined in such asylums or other places who ought to be discharged.[1]

Admission to Insane Asylum.—No person shall be admitted to or detained in the insane asylum as a patient or inmate (unless as a voluntary patient) except upon the sworn certificate of such person's insanity, made by two physicians of unquestioned integrity and skill residing in the State.

Such certificate shall be made not more than ten days previous to the admission of such insane person. Such certificate, with the certificate of the judge of the probate district in which the physicians reside, stating that such physicians are of unquestioned integrity and skill in their profession, shall be presented to the proper officer of the asylum at the time such insane person is presented for admission.

The certificate of the physicians shall only be given after a careful examination of the patient, made not more than five days previous to making the certificate.

An appeal may be taken by a relation or friend of the person committed, to the State board of supervisors, and pending such appeal the person shall not be confined.

A person may be received into an asylum without a certificate upon the order of the supreme or county court upon the presentation of a certified copy of the order or sentence.[2]

Voluntary patients may be received on their written application. Such persons shall not be detained after they give notice of desire to leave.[3]

Insane Hospitals.—The Vermont State Hospital is the hospital for the care and custody of the criminal insane of the State, and such of the insane poor as can be accommodated therein.

It is governed by a board of three persons, appointed by the governor, which may also contract with the Brattleboro Retreat for the care of part of the insane poor.

The said board appoints the superintendent.[4]

Private hospitals must be licensed by the Board of Supervisors of the Insane.[5]

When insane persons are not in hospitals, they must be kept

[1] Pub. Stats., s. 3,741–3,752.
[2] *Ibid.*, s. 3,753–3,763.
[3] *Ibid.*, s. 3,764–3,766.
[4] *Ibid.*, s. 3,767–3,780.
[5] *Ibid.*, s. 3,794–3,799.

in restraint by their guardians, or, if poor, by the overseers of the poor.[1]

CRIMINAL INSANE.—Persons acquitted or not indicted because of insanity may be committed to the State hospital or to the State prison.[2]

VIRGINIA.

[The references are to Pollard's Virginia Code, 1904.]

DEFINITIONS.—In the statutes generally the words "insane person" shall be construed to include every one who is an idiot, lunatic, *non compos*, or deranged.[3]

But in reference to commitments to the State hospitals the words "insane person" do not include idiots.[4]

CARE AND CUSTODY.—Adjudications of insanity are made on the complaint of any citizen or on the court's own motion, by any county or corporation judge, or justice of the peace. A warrant is issued; two physicians, one of whom if practicable is the person's physician, are summoned, who with the judge form a commission. The commission reports on a prescribed form, giving full history and diagnosis.[5]

If the person be found insane and one who ought to be confined in a hospital, the judge may so order, or commit him to a private sanitarium, or the care of friends.[6]

The writ of habeas corpus may be obtained to test the legality of detention in a hospital.[7]

The same proceedings apply to the adjudication of non-resident insane persons, but they shall be returned to their homes.[8]

When any person is found insane as above, the court of the county or corporation of which he is an inhabitant shall appoint a committee for him. The circuit courts have concurrent jurisdiction.[9]

On application of any party a committee may be appointed for an insane person not so adjudicated, or for a non-resident.[10]

The committee has the usual powers.[11]

[1] Pub. Stats., s. 3,800–3,806.
[2] *Ibid.*, s. 3,329, 2,330, 2,331, 6,063–6,066. This is the only State which authorizes the confinement in a State prison of persons *acquitted* on the ground of insanity.
[3] Virginia Code, s. 5, sub. 5.
[4] *Ibid.*, s. 1,712.
[5] *Ibid.*, s. 1,669.
[6] *Ibid.*, s. 1,670.
[7] *Ibid.*, s. 1,675.
[8] *Ibid.*, s. 1,676.
[9] *Ibid.*, s. 1,697, 1,700.
[10] *Ibid.*, s. 1,698, 1,699.
[11] *Ibid.*, s. 1,702–1,706.

Upon complaint of any relative, or if none, any two friends, an habitual drunkard, opium-eater, or person addicted to other drug habits and lost to self-control, who would be benefited by treatment in a private hospital or sanitarium, may be committed, by three justices so determining, to such an institution, for not exceeding four months. On appeal such person has the right to trial by jury. A committee may be appointed for such person by the circuit court.[1]

STATE HOSPITALS.—The State hospitals are the Eastern, at Williamsburg, the Western, at Staunton, the Southwestern, at Marion, and the Central (for colored persons of unsound mind), at Petersburg.[2]

Each is managed by a board of directors of three persons appointed by the governor, who constitute a general board of directors.[3]

The general board of directors appoints the superintendents, and other resident officers. The salaries of superintendents vary from $1,800 to $2,500, with board, etc. The superintendents appoint employees.[4]

In addition there is a commissioner of State hospitals, appointed by the governor, who is *ex-officio* chairman of the general and each of the special boards. He is the financial officer, and makes reports of the condition and needs of the hospitals.[5]

The superintendent may allow furloughs, and deliver the insane to their friends, who give bonds, or if harmless and incurable, without bond.[6]

Voluntary patients may be received in the hospitals, and non-residents when there are vacancies.[7]

All persons committed to the State hospitals are removed there and maintained at the expense of the State.[8]

CRIMINAL INSANE.—Any person charged with crime, found, in the court before which he is so charged, to be insane, may be confined in a State hospital. But any convict becoming insane shall be confined in a special ward in the State penitentiary.[9]

Trial may be suspended until a jury inquires into the fact as to the present sanity of a person accused of crime. If the jury

[1] Virginia Code, s. 1,713a.
[2] *Ibid.*, s. 1,660–1,661.
[3] *Ibid.*, s. 1,662.
[4] *Ibid.*, s. 1,663.
[5] *Ibid.*, s. 1,664.
[6] *Ibid.*, s. 1,688, 1,683.
[7] *Ibid.*, s. 1,677–1,678.
[8] Acts of Assembly, 1908, c. 401.
[9] Virginia Code, s. 1,682. But *cf.* s. 4,123.

find him insane, they shall also inquire as to his sanity at the time of the offence. If they find he was then insane, he may be discharged or committed for treatment. If they find he was not then insane, he shall be confined until he is restored and can be tried.[1]

After conviction and before sentence a jury may be impanelled to inquire into sanity.[2]

When a person tried for an offence is acquitted by reason of insanity, the verdict shall so state, and he shall be sent to one of the asylums.[3]

Washington.

[The references are to Ballinger's Annotated Codes and Statutes of Washington, 1897, Supplement, 1903.]

Care and Custody.—The superior court of any county has jurisdiction of commitments to the hospital for the insane, and also the appointment of guardians of insane persons and idiots.[4]

Any person may apply for the restraint of an insane person unsafe to be at large. The person shall be brought before the court, and he, or any one in his behalf, may demand a jury trial. Physicians shall be summoned. If the disease is recent or curable, or of a dangerous tendency, the court shall commit him to the State hospital for the insane or to the care of friends giving bond.[5]

No cases of idiocy, imbecility, harmless chronic mental unsoundness, acute mania a potu, or contagious or infectious disease shall be admitted to the State hospital.[6]

On the petition of a relative or friend and notice to an insane person or idiot, a guardian may be appointed.[7]

The guardian has the usual powers. He shall care for the maintenance of the incompetent and his family, and the education of his children.[8]

A foreign guardian may qualify in the State, on filing a copy of his letters and a bond.[9] If there is no foreign guardian, any person interested may apply for letters.[10] The powers and duties of such guardians are similar.[11]

[1] Virginia Code, s. 4,030–4,031, 4,033–4,034.
[2] *Ibid.*, s. 4,032–4,034.
[3] *Ibid.*, s. 4,035.
[4] Washington Code, s. 2,660, 6,424.
[5] *Ibid.*, s. 2,660–2,664, 2,677–2,678.
[6] *Ibid.*, s. 2,666–2,668.
[7] *Ibid.*, s. 6,424a (Supp.)–6,426.
[8] *Ibid.*, s. 6,424, 6,427–6,433, 6,439, 6,452–6,455, 6,444 (Supp.); *cf.* footnote to vol. 2, p. 1,790.
[9] *Ibid.*, s. 6,447.
[10] *Ibid.*, s. 6,449.
[11] *Ibid.*, s. 6,450–6,451.

The real property of idiots and insane persons may be sold at private sale through a court proceeding.[1]

Upon complaint by a person interested of any person addicted to the excessive use of intoxicating liquors, that he is an habitual drunkard, and squandering his property or abusing his family, he may be adjudged an habitual drunkard. Selling liquor to such a person is a crime; and any one whose person or property is injured by such adjudged drunkard when intoxicated may recover his damages from the one who gave him the liquor.[2]

Lists of adjudged habitual drunkards are posted in places of business of liquor-sellers.[3]

STATE HOSPITALS.—The State hospitals for the insane are "The Western Washington Hospital for the Insane," at Fort Steilacoom, and "The Eastern Washington Asylum for the Insane," at Medical Lake.[4]

The State Board of Audit and Control have the general management. The board consists of five members, appointed by the governor, one of whom is known as the commissioner of public institutions. The governor is chairman *ex officio*.[5]

The board shall appoint a superintendent, who shall have entire control of the medical, moral, and dietetic treatment of patients, of the discharge of patients, and hire officers and employees.[6]

Preference shall be given in admissions as follows: 1, cases of less than one year's duration; 2, cases of more than one year's duration according to prospects of recovery; 3, seniority of application, other things being equal; 4, the indigent shall have the preference generally.[7]

The superintendent's salary is $2,200; ward attendants', $600. They are furnished with quarters.[8]

CRIMINAL INSANE.—The commitment of insane convicts or persons accused of crime is by the governor and by the court wherein the jury finds him insane, respectively.[9]

But the warden of the State penitentiary apparently has power to send insane convicts to a State hospital.[10]

[1] Washington Code, s. 6,460–6,469.
[2] *Ibid.*, s. 6,487–6,492.
[3] *Ibid.*, s. 6,493.
[4] *Ibid.*, s. 2,651–2,654.
[5] *Ibid.*, s. 2,621–2,629, 2,655, 2,690–2,696.
[6] *Ibid.*, s. 2,655, 2,657–2,659, 2,673, 2,675.
[7] *Ibid.*, s. 2,672.
[8] *Ibid.*, s. 2,700, 2,701.
[9] *Ibid.*, s. 2,665, 2,664.
[10] *Ibid.*, s. 2,748, sub. 5.

When any person tried for an offence is acquitted by reason of insanity, the jury shall so certify, and if his condition be such that it is dangerous for him to be at large, the court may commit him to prison, or to the custody of friends giving bond.[1]

West Virginia.

[The references are to West Virginia Code, 1906 (West Publishing Company).]

Definitions.—"Persons under disability" includes insane persons. "Insane person" includes every one who is an idiot, lunatic, *non compos*, or deranged.[2]

In the chapter relating to care and custody in State hospitals, etc. (Acts, 1899, chap. xix., Acts, 1901, chap. liii.), "lunatic" includes every insane person who is not an idiot.[3]

Care and Custody.—Inquiry into insanity is a summary proceeding conducted by a justice of the county. Questions to be propounded are prescribed. If he decides that the person is a lunatic, he may either commit him to a hospital (the examining board of the hospital concurring), or to the care of a proper person giving bond. Non-residents are to be sent to their States.[4]

A committee is appointed by the circuit court for any person found to be insane, or in a criminal proceeding; and for any person found to be insane after an inquisition held by the circuit court upon application of any person interested, notice being given the lunatic.[5]

A like appointment may be made for any non-resident insane person having property in the State.[6]

The committee has the usual powers over the person and estate.[7]

State Hospitals.—The West Virginia Hospital for the Insane, at Weston, and the Second Hospital for the Insane, at Spencer, are under the management of boards of directors of nine persons each, appointed by the governor.[8]

The boards appoint the superintendents and assistants.[9]

Any one or more of the directors, with the superintendent,

[1] Washington Code, s. 6,959; but *cf.* s. 2,664.
[2] West Virginia Code, s. 293, sub. 13–14.
[3] *Ibid.*, s. 2,679.
[4] *Ibid.*, s. 2,644–2,652.
[5] *Ibid.*, s. 2,655, 2,668–2,669.
[6] *Ibid.*, s. 2,670.
[7] *Ibid.*, s. 2,672–2,675, 3,228–3,254, etc.
[8] *Ibid.*, s. 2,637–2,639.
[9] *Ibid.*, s. 2,641.

constitute an examining board, to examine persons brought to the hospital as lunatics.[1]

The board shall order any idiot received in the hospital removed to the county whence he came.[2]

The examining board may discharge those recovered.[3]

The West Virginia Asylum for Incurables, at Huntington, is under the control of a board of directors of five persons, appointed by the governor. They appoint the superintendent and assistants.[4]

The class of persons who shall be admitted shall consist of epileptics, idiots, and such other incurable defectives and insane as the board of directors may deem eligible, but not tubercular, cancerous, or leprous patients. Paying patients are admitted, but charity patients have the preference.[5]

The governor may transfer patients from the other hospitals to this.[6]

Admission is obtained for a person incapable of deciding for himself, by application of the father, guardian, etc., to the county court; otherwise, by petition of the person himself.[7]

Criminal Insane.—When a person charged with crime is not indicted because of insanity the grand jury shall so certify, and the court may commit him, etc.[8]

No person shall, while he is insane, be tried for a criminal offense. If a person so charged be suspected of being insane, a jury shall be convened. If they find him presently sane, they shall inquire no further, but if they find him insane, they shall inquire whether he was at the time of the offense; and if they so find he may be discharged or committed to a hospital. If they find he was then sane but now insane he may be committed until restored.[9]

After conviction the court may by jury inquire whether he has become insane and if so found commit him to a hospital.[10]

When a prisoner is convicted on account of insanity, the verdict shall state the fact, and the court may, if it deem him dangerous, send him to a hospital.[11]

[1] West Virginia Code, s. 2,641, 2,649–2,650.
[2] *Ibid.*, s. 2,654.
[3] *Ibid.*, s. 2,660.
[4] *Ibid.*, s. 2,683–2,689.
[5] *Ibid.*, s. 2,690–2,691, 2,698.
[6] *Ibid.*, s. 2,690.
[7] *Ibid.*, s. 2,692–2,693.
[8] *Ibid.*, s. 4,551.
[9] *Ibid.*, s. 4,575, 4,577, 4,578.
[10] *Ibid.*, s. 4,576.
[11] *Ibid.*, s. 4,579.

CONTRACTS, ETC.—A marriage between insane persons may be annulled.[1]

No person of unsound mind shall be capable of making a will.[2]

Persons of unsound mind are incompetent to testify as witnesses.[3]

WISCONSIN.

[The Referenees are to Wisconsin Statutes of 1898, Sanborn and Berryman; Supplement, 1906.]

DEFINITION.—In the statntes, the words "insane persons" shall be construed to include every idiot, *non compos*, lunatic, and distracted person.[4]

CARE AND CUSTODY.—A relative or friend of insane person or any person "who, by reason of extreme old age or other cause, is mentally incompetent to have the charge of his property" may petition county court for appointment of a guardian of his person and estate. Notice must be ordered by the court to be given the person, or the superintendent of an asylum where he is confined. When he has been already adjudged insane and committed to a hospital (see below) a special guardian may be appointed.[5]

Guardians may likewise be appointed for drunkards, spendthrifts, etc.[6]

After the order of notice (if a guardian is appointed) all contracts, except for necessaries, gifts, sales, and transfers of property shall be void.[7]

The superintendent of a hospital for the insane may apply for a guardian for any inmate having property.[8]

A county court may appoint a guardian for the whole State of the property of a non-resident incompetent.[9]

A guardian or friend of a lewd, insane, incompetent, or imbecile person may petition for an order of confinement.[10]

Guardians have the usual powers.[11]

Guardians *ad litem* may be appointed for the insane, with the usual powers.[12]

STATE HOSPITALS.—The "Wisconsin State Hospital for the

[1] West Virginia Code, s. 2,917.
[2] *Ibid.*, s. 3,134.
[3] *Ibid.*, s. 2,059.
[4] Wisconsin Statutes, s. 4,971, sub. 7.
[5] *Ibid.*, s. 3,976–3,977.
[6] *Ibid.*, s. 3,978.
[7] *Ibid.*, s. 3,979.
[8] *Ibid.*, s. 3,979a.
[9] *Ibid.*, s. 3,980.
[10] *Ibid.*, s. 3,981a–3,981b.
[11] *Ibid.*, s. 3,982–3,993.
[12] *Ibid.*, s. 2,615–2,618, 3,994.

Insane," at Madison, and the "Northern Hospital for the Insane," at Oshkosh, are maintained and governed by the State Board of Control of five persons appointed by the governor. This board acts as commissioners of lunacy, and as such may inquire into the sanity of any person confined in any public or private asylum, and into the conduct of such asylums.[1]

The board appoints superintendents, who have the immediate supervision of the State hospitals, and entire control over subordinate officers and employees.[2]

Admissions to the State hospitals are apportioned among the counties according to population. No person idiotic from birth, or who may safely be allowed liberty notwithstanding imbecility, shall be admitted; and no person incurably insane shall be retained to the exclusion of curable cases. Persons under charge or convicted of crime shall not be discharged without an order of the court.[3]

Any three citizens may apply to the county court for a judicial inquiry and an order committing a person to a State hospital. Two physicians are appointed as examiners in lunacy. The form of their report is prescribed. Notice to the insane person must be given, if not injurious to him, and he or a relative may demand a jury trial. In proper cases the person may be committed to a county hospital for the chronic insane. Upon petition alleging recovery, a similar proceeding may be had, or the State board of control may decide.[4]

Insane persons may be admitted as voluntary patients, upon two physicians' certificates.[5]

Paroles are permitted, by the superintendents, and after a parole of two years the presumption of insanity arising from the original adjudication that the person was insane ceases.[6]

All insane persons residents of the State admitted to the hospitals shall be maintained at the expense of the State and the county of residence; but relatives, friends, or guardians may contribute and may provide special attendance.[7] The financial ability of the person shall be examined into by the county judge on the inquisition, notice being given to the district attorney.[8]

[1] Wisconsin Statutes, s. 561–561q, 564, 580.
[2] *Ibid.*, s. 561q., 582.
[3] *Ibid.*, s. 583–584.
[4] *Ibid.*, s. 585–587.
[5] *Ibid.*, s. 587a.
[6] *Ibid.*, s. 587c. (Supp.)
[7] *Ibid.*, s. 588.
[8] *Ibid.*, Supp., s. 584a.

Non-residents may be sent to their State, etc.[1]

Release of inmates may be obtained by the writ of habeas corpus.[2]

A rehearing of the inquisition may also be had at any time on application of the person adjudged insane before any court of record of the county. A jury trial may be demanded, or the condition of the person reported on by two physicians.[3]

Any county board may, with the consent of the State board of control, maintain an asylum for the chronic insane.[4]

County asylums are governed by a board of three trustees. The judge of the district court of Milwaukee County has power to commit to the county hospital.[5]

Corporations may be formed to conduct asylums.[6]

CRIMINAL INSANE.—Insanity is pleaded as a defence by special plea filed with the plea of not guilty, and is first tried by the jury. The finding is conclusive. If the jury find that there is a reasonable doubt of the defendant's insanity at the time of the offence, they must acquit, and they shall specify that ground and also whether he has recovered. If the jury cannot agree on this plea, the trial proceeds, and the issue is then determined. The presumption of sanity shall prevail unless the evidence raises a reasonable doubt of his sanity. If the defendant is found still insane he shall be confined in a State hospital.[7]

When the court learns that a person accused is probably insane at the time, it shall in a summary manner make inquiry thereof by a jury or otherwise, and if he is found insane he shall be confined in a hospital or elsewhere as provided.[8]

Insane convicts may be ordered confined in a hospital, etc.[9]

Abuse of any inmate by an officer or employee is a crime.[10]

CONTRACTS, ETC.—Conveyances may be made by insane persons under order of the court; and contracts of persons afterward becoming insane may be enforced by decree of specific performance when proper.[11]

Marriages may be annulled for want of understanding, unless the plaintiff knew of the defendant's insanity.[12]

[1] Wisconsin Statutes, s. 594.
[2] *Ibid.*, s. 595.
[3] *Ibid.*, Supp., s. 587.
[4] *Ibid.*, s. 603–604s.
[5] *Ibid.*, Supp., s. 604a–604x.
[6] *Ibid.*, s. 1,786a.
[7] *Ibid.*, s. 4,697–4,699.
[8] *Ibid.*, s. 4,700.
[9] *Ibid.*, s. 4,944.
[10] *Ibid.*, s. 4,389.
[11] *Ibid.*, s. 3,498–3,519a.
[12] *Ibid.*, s. 2,350, 2,354.

Wyoming.

[The references are to Revised Statutes of Wyoming, Revision of 1899.]

Care and Custody.—Any person may petition the district court for the appointment of a guardian of a person insane "or from any cause mentally incompetent to manage his property," or an habitual drunkard. Notice must be given to the supposed incompetent and a trial by jury held. The jury finds also the value of the incompetent's property, if any, or whether he is a pauper. If there is any estate the judge, court commissioner, or clerk shall appoint a guardian of the person and estate.[1]

The estate is entitled to exemptions from creditors' claims for the care of the incompetent and his family.[2]

When the jury finds the person incompetent the county physician shall prepare a "lunacy statement," in a statutory form, showing diagnosis, history, and prognosis. This statement is filed and accompanies the warrant.[3]

Restoration to sanity is also to be determined by a jury.[4]

Guardians have the usual powers.[5]

Guardians to hold the property of non-resident incompetents may be appointed.[6]

In actions when the present insanity of a party is alleged but not apparent, the court may try the issue, or summon a jury.[7]

Insane Hospitals.—"The Wyoming State Hospital for the Insane" at Evanston is under the jurisdiction of the State board of charities and reform, composed of the governor, secretary of state, State treasurer, State auditor, and State superintendent of public works.[8]

The board appoints the superintendent, a physician, who manages the asylum.[9]

Paying patients may be admitted, and if the incompetent has an estate, the guardian must pay for his support from the estate.[10]

The superintendent's salary is $1,800; attendants', $35 per month.[11]

[1] Wyoming Statutes, s. 4,879–4,881, 4,883, 4,889, 4,890, 4,896, 4,897.
[2] *Ibid.*, s. 4,882.
[3] *Ibid.*, s. 4,884–4,886.
[4] *Ibid.*, s. 4,894–4,895.
[5] *Ibid.*, s. 3,472, 3,474, 4,890, 4,898–4,922.
[6] *Ibid.*, s. 4,923–4,929.
[7] *Ibid.*, s. 3,476.
[8] *Ibid.*, s. 632, 633, 647, 1,832, 1,848–1,852.
[9] *Ibid.*, s. 648.
[10] *Ibid.*, s. 649, 4,891, 4,892; *cf.* s. 4,887, 4,888, 651, 652.
[11] *Ibid.*, s. 659.

CRIMINAL INSANE.—"Drunkenness shall not be an excuse for any crime or misdemeanor, unless such drunkenness be occasioned by the fraud, contrivance, or force of some other person or persons, for the purpose of causing the perpetration of an offence, in which case the person or persons so causing said drunkenness for such malignant purpose shall be considered prineipal or principals, and suffer the same punishment as would have been inflicted on the person or persons committing the offence, if he, or she, or they had been possessed of sound reason and discretion. Where a crime rests in intention, the inebriated condition of the defendant at the time of committing the offence may be proven to the jury, as bearing upon the question of intention."[1]

Persons accused or convicted of crime are to be kept at the State asylum or elsewhere after being declared insane by the inquiry provided for as above.[2]

When a person condemned to death appears to be insane, a jury of twelve men determines the question, and execution is suspended until the governor, upon being convinced of restoration, issues a warrant appointing a time for the execution.[3]

[1] Wyoming Statutes, s. 5,369.
[2] *Ibid.*, s. 654–658.
[3] *Ibid.*, s. 5,408–5,410.

THE MEDICO-LEGAL ASPECTS

OF

MARRIAGE AND DIVORCE

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THE MEDICO-LEGAL ASPECTS OF MARRIAGE AND DIVORCE

SCOPE OF THE ARTICLE

In some aspects the whole subject of the sex relation is a medico-legal one. The purpose of this article, however, is not to treat of it in its broad aspects, but only to consider some of its legal problems with which the medical profession may have to deal.

CAPACITY FOR MARRIAGE.

All unmarried persons are legally capable of intermarriage provided they are of competent age, and possess the mental capacity at the time of the marriage requisite to give the necessary consent to the marriage contract.[1]

Impotency does not render a person legally incapable of marriage, but does render the marriage voidable.

Mental Capacity.—The effects of mental unsoundness on marriage have been fully treated above.[2] The tests are substantially the same as of capacity to enter into any civil contract: mental capacity sufficient so that the party is able to understand the nature and consequences of his act, and hence able to give an intelligent consent to the contract of marriage as such.[3]

[1] Meister *v.* Moore, 96 U. S., 76; O'Gara *v.* Eisenlohr, 38 N. Y., 296; Little *v.* Little, 13 Gray (Mass.), 264; Deitzman *v.* Mullin, 108 Ky., 610, 67 S. W. R., 210; Schouler's Dom. Rel., sec. 12; 1 Bishop Marr. Div. and Sep., sec. 3; Cyclopedia of Law and Proc., vol. 26, pp. 825–826. *Cf.* N. Y. Dom. Rel. Law, sec. 10; California Civil Code (1906), sec. 55; Turner *v.* Meyers *orse* Turner, 1 Hagg. Cons. (Eng.), 414 (1808).

[2] See vol. iii., p. 376.

[3] Kern *v.* Kern, 51 N. J. Eq., 514, 26 Atl., 831; Doe *v.* Roe, Edm. Sel. Cas. (N. Y.), 344; Nonnemacher *v.* Nonnemacher, 159 Pa. St., 634, 28 Atl. R., 439; Elzey *v.* Elzey, 1 Houst. (Del.), 308, 319; Prine *v.* Prine, 36 Fla., 676, 18 So. R., 781. The earlier view seems to have been that the marriage contract stood on precisely the same basis as any ordinary business contract, and if a party could enter into the latter, he was certainly capable of the former. Middleborough *v.* Rochester, 12 Mass., 363; Atkinson *v.* Medford, 46 Me., 510; *ex parte* Glen, 4 Desauss. Eq. (S. C.), 546; and in Nebraska in 1904, Aldrich *v.* Steen, 98 N. W. R. 445, 100 N. W. R., 311, 71 Neb., 33, 57. But later cases have tended toward the view that there must be capacity to comprehend the particular obligations and duties of marriage. Smith *v.* Smith, 47 Miss., 211; St. George *v.* Biddeford, 76 Me., 593;

Any mental unsoundness causing the degree of incapacity specified will render the marriage void, whether lunacy,[1] imbecility,[2] senile dementia,[3] delirium of fever,[4] or the temporary incapacity caused by drugs or alcohol.[5] The matter is usually subject to statutory regulation; the form of the statute may exclude intoxication as a disablement; and it may provide that a divorce instead of an annulment decree shall be the remedy.[6]

The effect of the mental incapacity is usually held to be that the marriage is absolutely void, and may be so declared in a suit for a decree of nullity brought by either party, or in any suit between other parties involving the validity of the marriage.[7] Nevertheless, the marriage may be confirmed by cohabitation during a lucid interval or after recovery;[8] at least, in jurisdictions where no ceremonial marriage is required.[9] And by statute in a number of States, the marriage is valid until judicially annulled, and the children of the marriage are legitimate.[10]

Physical Incapacity.—The effects of sexual incapacity have been treated in Dr. Rosse's article, Vol. II., page 625, of this work; but more particularly in their medical aspect.

The marriage relation presupposes the power of copulation. Incurable inability to perform substantially normal sexual intercourse,[11] with the possible proviso that in the case of a woman

Durham *v.* Durham, 10 P. D. (Eng)., 80 (adding that the contract of marriage is a very simple one, and does not require a high degree of intelligence to comprehend); Hunter *v.* Edney *orse* H., 10 P. D., 93.

[1] Wightman *v.* Wightman, 4 Johns. Ch. (N. Y.), 343; Chapline *v.* Stone, 77 Mo. App., 523.

[2] Johnson *v.* Kineade, 37 N. C., 470; Waymire *v.* Jetmore, 22 Ohio St., 271.

[3] Pyott *v.* Pyott, 191 Ill., 280; 61 N. E. R., 88.

[4] Jaques *v.* Pub. Adm., 1 Bradf. Surr. (N. Y.), 499.

[5] Prine *v.* Prine, 36 Fla., 676, 18 So. R., 781.

[6] See Synopsis of Statutes relating to mental unsoundness, *supra;* Elzey *v.* Elzey, 1 Houst. (Del.), 308.

[7] Bishop on Marr. Div. and Sep., sees. 627–645; Wightman *v.* Wightman, 4 Johns. Ch. (N. Y.), 343; Winslow *v.* Troy, 97 Me., 130, 133, 53 Atl., 1,008; Jaques *v.* Pub. Adm., 1 Bradf. Surr. (N. Y.), 499; Rawdon *v.* Rawdon, 28 Ala., 565; True *v.* Ranney, 21 N. H., 52; Turner *v.* Meyers *orse* Turner, 1 Hagg. Cons. (Eng.), 414; Powell *v.* Powell, 18 Kan., 371; Wiser *v.* Loekwood, 42 Vt., 720. Otherwise by statute. Stiekney *v.* Mathes, 24 Hun (N. Y.), 461.

[8] Cole *v.* Cole, 5 Sneed (Tenn.), 57; Sabalot *v.* Populus, 31 La. Ann., 854; Johnson *v.* Johnson, 45 Mo., 595; Ash's Case (Eng.), 1 Eq. Cas. Abr., 278.

[9] As in Sims *v.* Sims, 121 N. C., 297, 28 S. E. R., 407.

[10] See Synopsis of Statutes relating to mental unsoundness, *supra, passim;* also p. 376 of this volume.

[11] G. *v.* G., 67 N. J. Eq., 30; 56 Atl. R., 736; Smith *v.* Morehead, 59 N. C., 360; Devanbagh *v.* Devanbagh, 5 Paige (N. Y.), 554; Newell *v.* Newell, 9 Paige (N. Y.), 25; Powell *v.* Powell, 18 Kan., 371; Anonymous, 35 Ala., 226; Anonymous, 89 Ala., 291, 7 So. R., 100; Ferris *v.* Ferris, 8 Conn., 166; Lorenz *v.* Lorenz, 93

she must also be sterile,[1] is a ground for annulment.[2] The marriage may be decreed void upon the suit of the capable party, provided the impotency was unknown to him at the time of the marriage, and that he has not waived his right to relief by too long delay.[3] And in spite of English decisions intimating the contrary, we think the marriage may be annulled at the suit of the impotent person himself provided he was honestly ignorant of his condition; though otherwise not.[4]

But sterility alone, whether caused by an operation, such as ovariotomy, or otherwise, is not a ground for annulment.[5]

While sterility without incapacity for copulation is no ground for annulment, fecundity proved by the birth of children seems to be considered a complete defence to an action for annulment against the wife.[6]

The courts have not made absolute impossibility of copulation the test of incapacity sufficient for annulment. Thus, in a case where the woman was so excessively sensitive and nervous that it was not possible unless she were to submit to the influence of morphine, a decree was granted.[7] These hysteria cases seem to be not rare, among both males and females.[8]

In another English case[9] it was found that the woman's external genitals were perfect; but the vagina was contracted in

Ill., 376; J. G. *v.* H. G., 33 Md., 401; Bascomb *v.* Bascomb, 25 N. H., 267; Merrill *v.* Merrill, 126 Mass., 228.

[1] Riley *v.* Riley, 73 Hun (N. Y.), 575.

[2] Or divorce, if the local statute so provides.

[3] Smith *v.* Morehead, 59 N. C., 360; G. *v.* G., 67 N. J. Eq., 30, 56 Atl. R., 736; Peipho *v.* Peipho, 88 Ill., 438.

[4] Bishop's Marriage, Div. and Sep., secs. 792–793; *contra*, Norton *v.* Seton, 3 Phill. Eccl., 147; A. *v.* A., 19 L. R. (Ireland), 403.

[5] Payne *v.* Payne, 46 Minn., 467; Wendel *v.* Wendel, 30 App. Div. (N. Y.), 447; Schroter *v.* Schroter, 56 Misc. (N. Y.), 69; Anonymous, 89 Ala., 291, 7 So. R., 100; Griffeth *v.* Griffeth, 162 Ill., 368, 44 N. E. R., 820; J. G. *v.* H. G., 33 Md., 401; Deane *v.* Aveling, 1 Rob. Eccl. (Eng.), 279; Devanbagh *v.* Devanbagh, 5 Paige (N. Y.), 554.

[6] Riley *v.* Riley, 73 Hun (N. Y.), 575.

[7] G. *v.* G., L. R. 2 P. and D., 287, 40 L. J. P. and M., 83, 25 L. T. Rep. N. S., 510, 20 Wkly. Rep., 103; *cf.* P. *v.* P., 11 Brit. Col., 369; P. *v.* L. *orse* P., 3 P. D., 73; H. *v.* P. *orse* H., 3 P. and D., 126; S. *v.* A., 3 P. D., 72; L. *v.* L., 7 P. D., 16; Merrill *v.* Merrill, 126 Mass., 228.

[8] *Forel*, The Sexual Question, New York, 1908, pp. 85, 219. The author of this interesting treatise describes several cases of "psychic impotence," and remarks (p. 219): "This condition, which depends on autosuggestion, is best treated by hypnotic suggestion." In any case where such conditions are alleged as ground for annulment, the curability of the abnormal state by hypnotic treatment will present an important question for the medical expert, inasmuch as curable impotency is not a sufficient ground. (*Infra.*)

[9] Deane *v.* Aveling, 1 Rob. Eccl., 279, 298.

depth, admitting of penetration to perhaps less than half the usual extent, and becoming impervious at that depth, where it formed a *cul de sac* with no communication to any of the internal organs. The uterus was absent. Upon these facts, and solely because no complete copula could take place, the marriage was declared void. The learned judge, Dr. Lushington, said: "Sexual intercourse, in the proper meaning of the term, is ordinary and complete intercourse; it does not mean partial or imperfect intercourse; yet I cannot go to the length of saying that every degree of imperfection would deprive it of its essential character. There must be degrees difficult to deal with; but if so imperfect as scarcely to be natural, I should not hesitate to say that, legally speaking, it is no intercourse at all."

In a Maryland case, the development of the woman's sexual organs had been arrested before puberty; they were those of a child. Annulment was allowed.[1]

It has been noted that it is in general only incurable incapacity which is a ground for annulment. The rule was thus stated by Chancellor Walworth of New York in the early case of Devanbagh *v.* Devanbagh:[2]

"By the English law, as it existed at the first settlement of this country, and as it now exists, to authorize a sentence of nullity on the ground of impotence, it is necessary for the complainant to establish the fact of the alleged incapacity at the time of the marriage, and that such incapacity still continues, and is incurable."[3] "This also appears to be the law of France, and of Spain and Holland. And it is probably the law of the continent of Europe generally."[4]

The Chancellor then quotes from Dr. Beck's "Medical Jurisprudence" to show that cases of impotence on the part of the female which will not yield to proper medical treatment or a surgical operation are of rare occurrence.[5]

More recent cases, especially in England, have limited the

[1] G. *v.* G., 33 Md., 401; *cf.* S. *v.* A., 3 P. D., 72.

[2] 5 Paige Ch., 554, at page 556; see also Serell *v.* Serell, 31 L. J. P. and M. 55; 2 Swab. and T., 422.

[3] Citing 1 Chitty's Med. Jurisp., 375; Chitty's Law of Husb. and Wife, 16; Brown *v.* Brown, 1 Hagg. Eccl. Rep., 523; Welde *v.* Welde, 2 Lee's Eccl. Ca., 580. See also Anonymous, 35 Ala., 226; Ferris *v.* Ferris, 8 Conn., 166; Lorenz *v.* Lorenz, 93 Ill., 376; J. G. *v.* H. G., 33 Md., 401; Bascomb *v.* Bascomb, 25 N. H., 267; Berdolt *v.* Berdolt, 56 Neb., 792, 77 N. W. R., 399.

[4] Citing 1 Beck's Med. Jurisp. 5th ed., 68; 4 Partida, tit. 8, Law 2; Van Leeuw. Com., 87.

[5] 1 Beck's Med. Jurisp., 89.

supposed rule that if the impotency can be cured, a decree of annulment will not be granted. It may, we think, safely be stated as law that if the defendant could obtain a cure but refuses absolutely to undergo treatment, or in any event if the treatment would be dangerous, a decree will be granted.[1]

And it may further be stated that if the impotency is due to the fault of the defendant, as, for example, to habits of self-abuse which he refuses or fails to restrain, the fact that such condition is curable will be no defence to him.[2]

Refusal to allow intercourse has been held to be no proof of impotency.[3]

In England some of the early canon law decisions where the wife was plaintiff attempted to establish a rule that there must have been three years of cohabitation, at the end of which the wife was found to be *virgo intacta* before the marriage could be annulled.[4]

No such rule has ever gained a foothold in America;[5] but in all countries one of the problems for the medical expert to determine in many cases will be whether a wife, whose first marriage it is sought to annul, is still a virgin. This purely medical question will be found treated in the article on Rape in this work.[6]

The physical examination of one or both parties is frequently ordered by the court in cases of this character. The subject is treated in this work under that heading.[7]

Owing to the local statute, in many States a divorce instead of a decree of annulment is granted. This makes no difference in the substantive law applicable.

[1] L. *v.* L., 7 P. D., 16; *cf.* G. *v.* G., 2 P. and M., 287 (*supra*); P. *v.* L., 3 P. D., 73; W. *v.* H., 2 Swab. and T., 240.

[2] F. *v.* D., 4 Swab. and T., 86; S. *v.* E., 3 Swab. and T., 240; Griffeth *v.* Griffeth, 162 Ill., 368, 44 N. E. R., 820, 55 Ill. App., 474.

[3] Merrill *v.* Merrill, 126 Mass., 228; *contra*, F. *v.* P. *orse* F., 75 L. T., 192; B. *orse* H. *v.* B., [1901] P. 39.

[4] See M. *v.* H., 3 Swab. and T., 517; M. *v.* B., 3 Swab. and T., 550; Pollard *v.* Wyborn, 1 Hagg. Eccl., 725; Anonymous, 11 W. N. Cas., 479; Lewis *v.* Hayward, 35 L. J. P. and M., 105.

[5] Griffeth *v.* Griffeth, 162 Ill., 368, 372; 44 N. E. R., 820.

[6] Vol. ii., p. 662 *et seq.*

[7] Vol. ii., p. 496. See Anonymous, 89 Ala., 291; Anonymous, 35 Ala., 226; Anonymous, 34 Misc. (N. Y.), 109, 69 Supp. 547; Cahn *v.* Cahn, 21 Misc. (N. Y.), 506, 48 Supp., 173; Newell *v.* Newell, 9 Paige (N. Y.), 25; Devanbagh *v.* Devanbagh, 5 Paige (N. Y.), 554; Le Barron *v.* Le Barron, 35 Vt., 365; Chicago & N. W. Ry. Co. *v.* Kendall, 167 Fed., 62; Union Pac. R. Co. *v.* Botsford, 141 U. S., 250; Geis *v.* Geis, 116 App. Div. (N. Y.), 362, 101 Supp., 845.

It is fully settled that the marriage of an impotent person is voidable, not void.[1] Unless such marriage had been annulled, therefore, the remarriage of either party would be bigamous.

THE LEGAL EFFECTS OF DISEASE ON MARRIAGE.

Annulment for Fraud.—The particular marital fraud which is of medico-legal interest is the concealment or fraudulent denial of the presence of disease, especially venereal disease. The law is now settled that before marriage it is the duty of a person having a venereal disease to disclose the fact to his or her intended husband or wife, at least, if he has knowledge thereof.

In general, a marriage can be annulled, as the New York Revised Statutes state (declaring the common law), "when the consent of either party shall have been obtained by force or fraud."[2]

Whether the marriage has been consummated is of prime importance, though perhaps not necessarily of controlling importance, when it is sought to annul a marriage for fraud. For, after consummation, the marriage ripens into a "public status," which society has an interest in perpetuating. Then the marriage will not be annulled except for the most serious cause.[3]

But, according to the authority of some of the later, and, as we think, more sensible decisions, before the marriage is consummated the marriage will be annulled for practically any cause that would justify the avoidance of an ordinary contract. "When, however, the fraud is discovered before the marriage is consummated, and the innocent party refuses to cohabit, the marriage is so inchoate and incomplete that the *status* of the parties is similar to that of parties to an executory contract, and may be annulled without violating any considerations of public policy."[4]

At least before the marriage is consummated, it is the established law in America that the concealed existence of venereal

[1] A. *v.* B. and ano., 1 P. and D. (Eng.), 559; Nelson on Div. and Sep., vol. 2, § 705; G. *v.* G., 67 N. J. Eq., 30; 56 Atl. R., 736.

[2] Consol. Laws of 1909, ch. 14, s. 7 (Domestic Relations Law).

[3] But even after consummation a marriage has occasionally been annulled because of the husband having concealed that he had syphilis. Decision of Truax, J., July, 1897, referred to in Anonymous, 21 Misc. (N. Y.), 765. See also Gould *v.* Gould, 78 Conn., 242, 61 Atl., 604; *cf.*, however, Vondal *v.* Vondal, 175 Mass., 383.

[4] Di Lorenzo *v.* di Lorenzo, 71 App. Div. (N. Y.), 509, 519, 174 N. Y., 467; Smith *v.* Smith, 171 Mass.,

disease in one of the parties to a marriage is ground for the annulment thereof.[1]

The reasons for the rule are obvious. They have never been more succinctly stated than by the Supreme Court of Michigan.[2] "While it is the policy of the law to encourage marriage, it is not the policy of the law to encourage unhappy marriages."

The danger to the healthy party to the marriage, the likelihood of the offspring being infected with the disease, the plain breach of duty in failing to disclose the condition, all lead to the conclusion that the innocent party ought to have relief from such a marriage.[3]

In one State the same ruling has been made when a less loathsome disease was concealed. Thus, in a State where a statute forbids an epileptic to marry, under penalty of imprisonment, it has been held that concealment of epilepsy, or the failure to disclose it, is such a fraud as will justify the annulment of the marriage.[4] But the courts are not likely to allow annulment for the concealment or non-disclosure of other diseases than venereal ones, or diseases equally dangerous, except in extreme cases;[5] at least, not after the marriage has been consummated. When there has been active fraud, an untruthful denial of the presence of disease, a stronger case for annulment is presented.

Disease Rendering Cohabitation Dangerous as a Defence to an Action for Breach of Promise of Marriage.—In 1858 an English court held[6] that the defendant's plea that after promise of marriage he became affected with a

404, 408; Bishop on Marr., Div. and Sep., § 166; Nelson on Marr. and Div., §§ 600, 601; Svenson *v.* Svenson, 178 N. Y., 54, 58. But see Lyon *v.* Lyon, 230 Ill., 366, 82 N. E. R., 850, holding that in all cases the misrepresentation must be such as affects the marital state directly.

[1] Smith *v.* Smith, 171 Mass., 404, 408; 50 N. E. R., 933; Vondal *v.* Vondal, 175 Mass., 383; Ryder *v.* Ryder, 66 Vt., 158, 28 Atl., 1,029; Svenson *v.* Svenson, 178 N. Y., 54; Meyer *v.* Meyer, 49 How. Pr., 311; Anonymous, 21 Misc. (N. Y.), 765; McMahen *v.* McMahen, 186 Pa. St., 485, 40 Atl., 795; Martin *v.* Martin, 54 W. Va., 301, 46 S. E. R., 120; Crane *v.* Crane, 62 N. J. Eq., 21, 49 Atl., 734.

[2] Goddard *v.* Westcott, 32 Mich., 180, 46 N. W. R., 242.

[3] Smith *v.* Smith, 171 Mass., 404, 408; 50 N. E. R., 933.

[4] Gould *v.* Gould, 78 Conn., 242, 61 Atl., 604; otherwise where there is no such statute, Lyon *v.* Lyon, 230 Ill., 366, 82 N. E. R., 850.

[5] Kraus *v.* Kraus, 9 Ohio S. and C. P. Dec., 515, 6 Ohio N. P., 248, where the husband was denied a decree of annullment sought on the ground that his wife concealed the fact that she had a glass eye; Lyon *v.* Lyon, 230 Ill., 366, 82 N. E. R., 850.

[6] Hall *v.* Wright, 1858, E. B. and E., 746.

pulmonary disease and incapable of marriage without danger to life, is no defence to an action for breach of promise. But this decision was not followed in a case decided in 1906.[1] In the later case, the defendant in a suit for breach of promise wrote to the father of the lady to whom he was engaged that the marriage could not take place because he felt his mind giving way. Subsequently he was certified as a lunatic and committed to an asylum. The court held that the action for breach of promise could not be maintained. And such is the accepted rule in the United States.

This is an exception to the ordinary rule of contract that impossibility of performance is no defence to an action for breach of contract. The reason is that public policy forbids marriage when a disease of such character as would make the fulfilment of the promise of marriage dangerous, has supervened. Thus, in a case where both parties probably knew at the time of the engagement that the man had tuberculosis, and he afterward refused marriage, it was held that the woman could not recover for the breach of promise.[2]

The existence of some natural impediment to marriage will likewise be a defence.[3] But it is believed that if the diseased party fraudulently concealed his condition at the time he induced the other party to make a mutual promise of marriage, he would not be allowed to avail himself of his own fraud to avoid liability for breach of his promise.[4]

In any event, the contracting of a temporary curable disease is legal ground for a postponement of the marriage ceremony.[5]

Disease as a Ground for Divorce.[6]—Where a partial or absolute divorce is allowed for cruelty, it has been held that for the husband to compel sexual intercourse when he has a venereal disease, is legal cruelty;[7] at least some cases say when the inter-

[1] Liddell *v.* Easton's Trustees, 9 F., 154.

[2] Grover *v.* Zook, 44 Wash., 489, 87 Pac., 638. See also Allen *v.* Baker, 86 N. C., 91; Sanders *v.* Coleman, 97 Va., 690, 39 S. E. R., 621 (urinary trouble); Shackleford *v.* Hamilton, 93 Ky., 80, 19 S. W. R., 5 (syphilis, of which the defendant honestly believed himself cured); Gardner *v.* Arnett, 21 Ky. L. R., 1, 50 S. W. R., 840; Goddard *v.* Westcott, 32 Mich., 180, 46 N. W. R., 242.

[3] Gring *v.* Lerch, 112 Pa. St., 244, 3 Atl., 841.

[4] *Cf.* Shackleford *v.* Hamilton, 93 Ky., 80, 19 S. W. R., 5.

[5] Trammell *v.* Vaughn, 158 Mo., 214, 59 S. W. R., 79.

[6] Insanity as a ground for divorce, see vol. iii., p. 377.

[7] Collett *v.* Collett, 1 Curt. Eccl. (Eng.), 678, reversed in Jud. Com. Privy Coun., 1840, Wadd. Dig., 138; Long *v.* Long, 2 Hawkes, 189; Brown *v.* Brown, L. R. 1 P. and M., 46;

course results in the wife becoming infected,[1]—a distinction of doubtful propriety!

Contracting Venereal Disease as Proof of Adultery.—In several cases it has been held that the fact that the husband long after marriage contracts a venereal disease is *prima facie* proof that he has committed adultery, provided his wife either has not the disease, or became infected with it from him.[2] But we think that, in view of modern medical opinion, such evidence, though it may furnish *prima facie* proof of adulterous intercourse, is essentially weak. For there are to be considered the well-established possibility of infection by other causes, especially in the case of syphilis; and also the phenomena of latent gonorrhœa, with the suppression of ordinary symptoms during a considerable period of time.

Pregnancy at the Time of Marriage as a Ground for Annulment or Divorce.—The courts have been disposed to grant relief to a husband who marries a woman supposing her to be chaste, but finds that she is not only unchaste, but pregnant by another man. Non-disclosure of the pregnancy is such a fraud as will allow him a decree of annulment.[3]

But if he knew her to be unchaste,[4] or had had intercourse with her himself,[5] even her assurances that she was not pregnant will not avail him.

Since the action is for fraud, it would seem that the woman must have known of her pregnancy as well as of her previous

Boardman *v.* Boardman, L. R. 1 P. and M., 233; C. *v.* C., 28 Eng. L. and Eq., 603, 609, s. c. *sub nom.* Chesnutt *v.* Chesnutt, 1 Spinks, 196; Boughner *v.* Boughner, 19 Ky. L. R., 507, 41 S. W. R., 26; Glenn *v.* Glenn, 87 Mo. App., 377.

[1] Ciocci *v.* Ciocci, 26 Eng. L. and Eq., 604; Canfield *v.* Canfield, 34 Mich., 519.

[2] Bishop on Marr. Div. and Sep., § 632; Johnson *v.* Johnson, 14 Wend. (N. Y.), 637; Popkin *v.* Popkin, 1 Hagg. Eccl., 765, note 3; Mount *v.* Mount, 15 N. J. Eq., 162. But the wife's having the disease is not sufficient alone to prove her husband's adultery. Holthoefer *v.* Holthoefer, 47 Mich., 260, 643, 11 N. W. R., 150; Homburger *v.* Homburger, 46 How. Pr. (N. Y.), 343. Nor is the fact that the husband possesses mixtures commonly used as remedies for such diseases. Mack *v.* Handy, 39 La. Ann., 491, 2 So., 181. Nor that he has stains on his linen of uncertain character. James *v.* James, 29 Neb., 533, 45 N. W. R., 777; Ferguson *v.* Ferguson, 1 Barb. Ch. (N. Y.), 604.

[3] Donovan *v.* Donovan, 9 Allen (Mass.), 140; Allen's Appeal, 99 Pa. St., 196; Sinclair *v.* Sinclair, 57 N. J. Eq., 222, 40 Atl., 679; Harrison *v.* Harrison, 94 Mich., 559, 54 N. W. R., 275; Baker *v.* Baker, 13 Cal., 87.

[4] Crehore *v.* Crehore, 97 Mass., 330.

[5] Seilheimer *v.* Seilheimer, 40 N. J. Eq., 412, 2 Atl., 376; Long *v.* Long, 77 N. C., 304; Hoffman *v.* Hoffman, 30 Pa. St., 417; but see Scott *v.* Shufeldt, 5 Paige (N. Y.), 43.

unchaste conduct, if she is to be charged with fraudulent non-disclosure. But this question apparently has not been raised in the cases. If it were raised, it would present an occasion for medical expert testimony to show the probability of knowledge. In the decided cases, the short duration of the pregnancy prior to marriage seems to negative any certain knowledge on the part of the woman that she was not only unchaste but pregnant.[1] In fact, a woman's means of discovering that condition in herself are not much superior to those of a stranger. Perhaps the rule of law must be taken to be somewhat anomalous: that concealed unchastity, in itself no ground for annulment, if it happens even without the woman's knowledge to be accompanied by pregnancy, may be such ground.

[1] In Allen's Appeal, 99 Pa. St., 196, parturition took place about seven months after the marriage; in Sinclair *v.* Sinclair, 57 N. J. Eq., 222, 40 Atl., 679, and Harrison *v.* Harrison, 94 Mich., 559, 54 N. W. R., 275 about six months after.

THE MEDICO-LEGAL RELATIONS

OF

X-RAYS AND SKIAGRAPHS.

BY

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X-RAYS AND SKIAGRAPHS.

THE X-RAY IN FORENSIC MEDICINE.

For a great many years experimenters had been watching the peculiar effect produced in glass tubes when, after exhausting the air, currents of high tension were forced though them.

Geissler tubes were the forerunners of Crookes tubes. Crookes tubes differed from Geissler tubes in degree of vacuum. It was noticed by Crookes that the higher the degree of vacuum attainable the more uniform the luminosity in the tube appeared.

Lenard discovered, through the assistance of Hertz, that when a current of sufficiently high tension passed through a vacuum tube possessing a certain degree of rarefaction, a stream of luminosity proceeded from the cathode or negative side of the tube toward the positive.

Through further experimentation it was found that this cathode stream, as it was called, could be bent from its path whenever a strong magnet was brought into close enough proximity. This bent cathode ray, however, refused to pass through the glass of the tube, but impinging upon it, was changed into one of some other kind, or at least a ray having different qualities.

The cathode ray was later studied by Lenard, after he had succeeded in passing it out of the tube through an aluminum window.

Lenard then describes in detail the effects of a cathode ray upon photographic plates as well as upon other chemicals. Besides the cathode rays, he says, there are other rays in a tube when excited into activity by a high-tension current.

It was this statement of "other rays" that interested Professor Roentgen, and in December, 1895, he presented his paper on the effects of the newly discovered ray.

This ray possessed a wave-length far shorter than any yet

measured, which in number or vibratory rate far exceeded all human calculations.

This ray would not obey the ordinary laws for light. It could not be seen or heard, and various articles, otherwise opaque to light, became transparent, while such media as glass offered more or less resistance to the ray. Neither could this ray be bent from its path, nor could it be refracted or diffracted; it passed in straight lines through substances according to their specific gravity. That is to say, the metal aluminum having a lower specific gravity than glass, these rays will pass through an aluminum plate more easily than through glass. Because these rays affected photographic plates in the same manner as light rays do, yet would not obey the ordinary laws of light, Professor Roentgen described them as the *x*-rays.

A Crookes tube became an *x*-ray tube when the proper size and shape were selected; later an anode having a facing of platinum was placed within it. The metal platinum possessing a very high specific gravity, the cathode rays would not pass through it; but, when focussed upon such a target, were converted into *x*-rays.

This theory is not quite clear, for it is a fact that as long as we have within the *x*-ray tube a rather low degree of vacuum just so long do we have the cathode rays. On the other hand, when the vacuum is raised beyond a certain point the cathode ray is no longer present, at least cannot be seen; but the *x*-rays are just so much more abundant and possess so much more power of penetration.

It remains for the present a disputed point whether the cathode rays are converted into *x*-rays or whether *x*-rays begin to exist where the cathode rays cease. A suitable *x*-ray tube has its vacuum reduced to about one-millionth of an atmosphere. The *x*-ray possesses the power of causing various substances to become fluorescent. The walls of the tube, if they are made of sodium glass, will fluoresce with pale yellow, while if the tube is made from lead glass it will appear a light blue. Lead glass is also much the more impervious to the passage of the *x*-ray, and is therefore frequently used in the construction of tubes. These tubes constructed of lead glass must have a window made of sodium glass in order that the rays may properly pass from them.

Certain chemicals, such as barium platino-cyanide, tungstate of calcium, quinine, etc., also fluoresce under the *x*-ray. Of these, barium platino-cyanide fluoresces the most brilliantly, and with a green-yellow color. When any object, whose different parts offer varying resistances to the passage of the ray, is placed between the tube and a screen covered with this salt, a shadow, whose parts vary in intensity with the different resistances of the parts of the object, is cast upon the screen. When the human body is thus placed between tube and screen, a shadow, whose different parts vary in intensity proportionately to the different densities of the body structures, appears upon the screen.

Such a procedure is termed a fluoroscopic examination from the fact that the prepared barium platino-cyanide screen and suitable shadow-box is termed a "fluoroscope." When examinations of patients are continued too long, or the patient is placed too close to the tube, a reaction or dermatitis results.

All tubes do not act alike; the rays seem to cause the greatest amount of effect where their progress appears to be arrested.

Tubes are classified as soft, medium, and hard, meaning thereby that a soft tube is one giving only a few soft *x*-rays, so weak that they do not possess very much power of penetration. When the hand is held between such a tube and the screen, the bones appear very black. All the rays having such feeble power of penetration are arrested upon the surface, or rather just beneath the horny layer of the cutis. Such rays when used too long are very apt to be followed by deleterious results.

A tube with a medium ray is one which, when the hand is held between it and the fluoroscope, sends its ray through the soft parts with ease, the bones appearing gray because the ray passes through them. Such a tube is much safer for examinations because the rays are not all arrested just beneath the skin, but pass on to the deeper structures; in other words, their destructive effect is spread through a greater volume in depth. Such a tube can be used with greater freedom than one giving soft rays.

A hard tube produces the powerful rays that will pass through the body, showing outlines of ribs, heart, lungs, liver, and also stomach when it is filled with bismuth solutions. It will, when the hand is held in front of the screen, cause the outline of the bones almost to disappear; the soft parts are only slightly or not at all discernible. This tube is really the safest; patients may be

exposed, especially if kept thirty or more inches from the tube, for fifteen to twenty minutes without harmful result.

All tubes have a tendency to work up with age; the more they are used the harder do they become. New tubes, however, in the beginning are very apt to work lower; and for that reason a new tube should never be used to make fluoroscopic examinations. In the first place, the tube is liable to work lower; and the patient, having been made more or less susceptible by the original hard rays from such a tube, is now gradually subjected to the less penetrating rays, which are under such circumstances very liable to set up an irritation in the tissues, which will develop into a radio-dermatitis. In the second place, when a new tube is thus overworked, it takes very much longer to bring it back to a state of usefulness and safety. Again, tubes which have been used have a deposit of the oxides of platinum and iron deposited upon the inner surface of the glass, causing them to appear blackened. This fine metallic covering assists in holding back or interfering with the outward passage of the soft rays; therefore, the older or seasoned tubes are much safer than the new tubes just from the factory.

Tubes made partially of lead glass are termed "safety tubes"; this refers, not, as might be thought, to the safety of the patient, but rather to the safety of the operator or other persons in the room during the time of treatment or examination.

These tubes are so constructed that the rays will pass out of a certain crown-glass window, and can therefore be focussed or pointed in any direction desired, and as very few or no rays leave the tube through the rest of the wall of the tube, it must be apparent that it is reasonably safe for the operator to remain within close proximity to such a tube when in operation.

All tubes, whether old or new, soft or hard, can under favorable conditions cause a radio-dermatitis, even with very short or few exposures; in fact, it is not impossible, though improbable, that with a highly susceptible person a single exposure of three minutes may cause such a reaction as to be termed a dermatitis.

There are reasonably safe measures for exposing a patient to the action of the ray, but there are no tubes that under all circumstances are absolutely safe, because the patient's idiosynerasy cannot be known until after a reaction has taken place.

A few years ago there existed a wide range of differing opin-

EXPLANATION OF PLATE V.

FIGURE 1.—Lateral view of fractured femur, showing the upper fragment displaced forward.

FIGURE 2.—Antero-posterior view of the same fracture, but giving the appearance of perfect apposition and reduction.

FIGURE 3.—Lateral view when perfectly reduced.

FIGURE 4.—Antero-posterior view after perfect reduction.

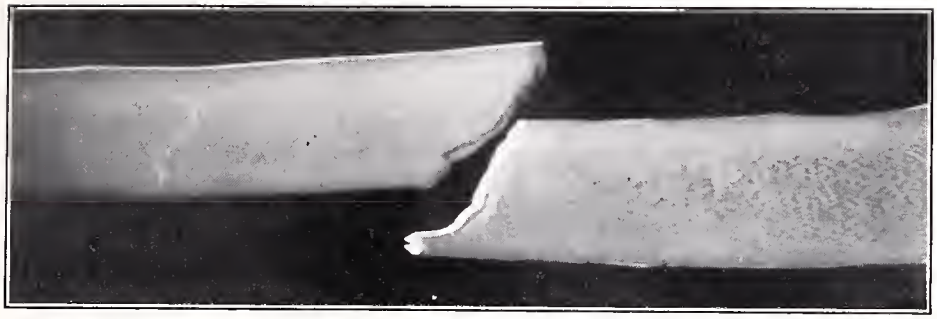
NOTE.—Figures 2 and 4 do not differ materially from each other, although in the latter the fracture is reduced, while in the former it is not. It is therefore necessary to show two views, taken at right angles to each other.

EXPLANATION OF PLATE VI.

FIGURE 1.—Antero-posterior view of a fracture of the forearm, showing apparent reduction.

FIGURE 2.—Lateral view of the same fracture, showing its unreduced condition.

MEDICAL JURISPRUDENCE—PLATE V.



1.

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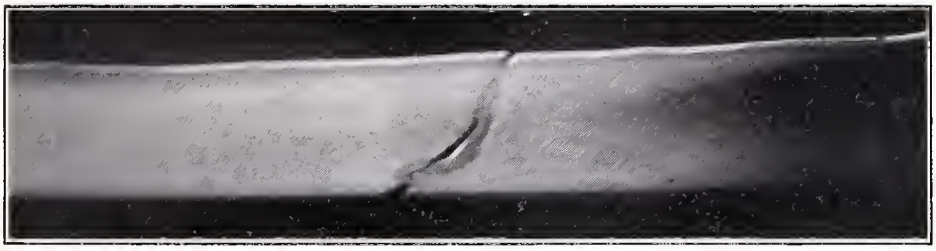

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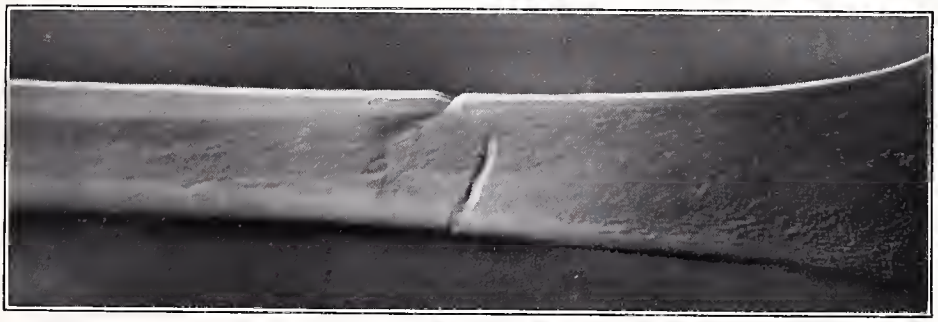

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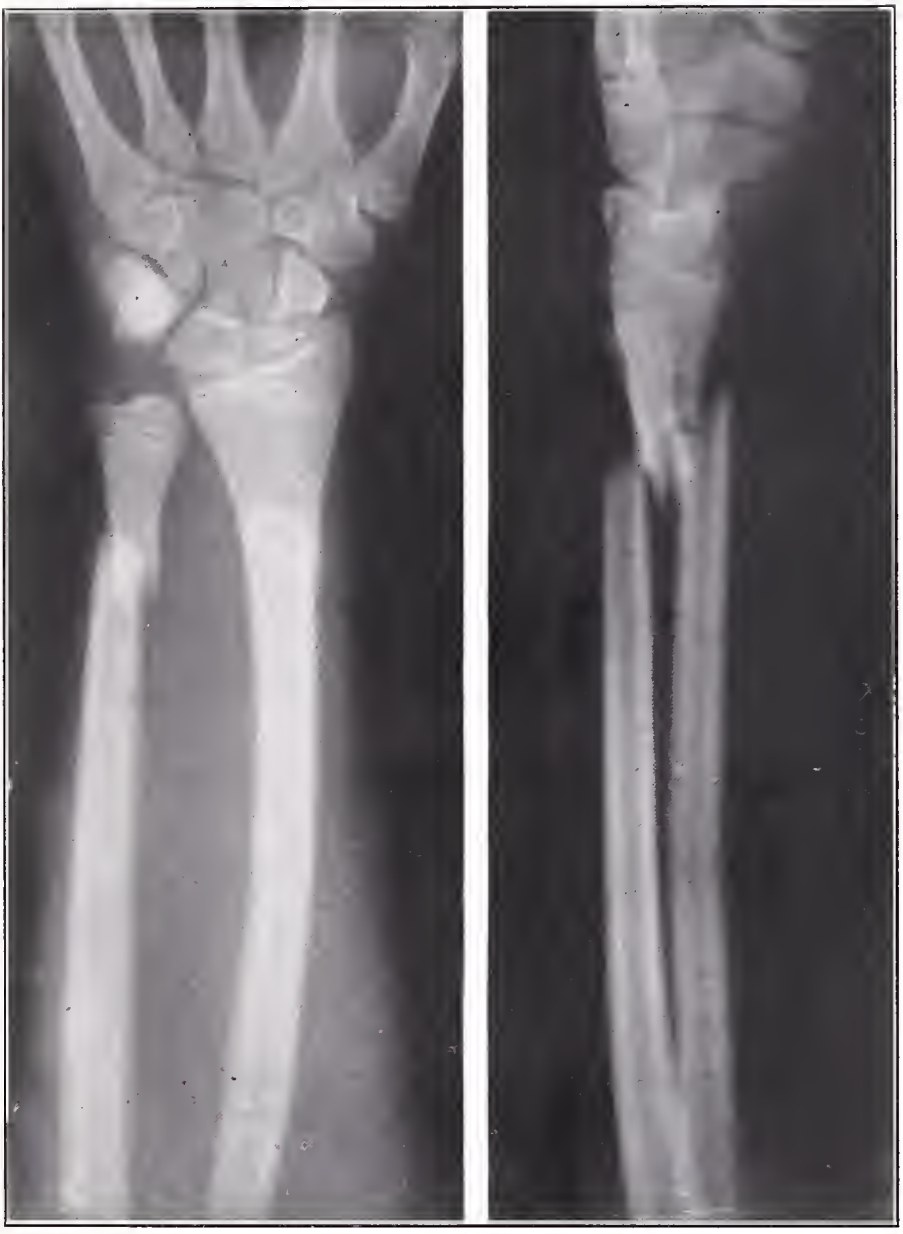

1. 2.

ions as to the legal value and admissibility of a Roentgen-ray photograph. According to circumstances, attorneys argued for or against the introduction of negatives as well as prints in courts and before juries. There is no doubt that both sides had much that was right and just in their favor. Fortunately, the condition of things has changed much for the better. In the early days only a very few men were sufficiently well acquainted with the proper technique for the production of a suitable *x*-ray; after the same had been produced, there was still lacking the experience that only time can supply, correctly to interpret a negative. It was easy to produce enough evidence to place in doubt the introduced reading of a negative. Not uncommonly it happened that one *x*-ray operator produced in court a negative that clearly showed a supposed fracture, while another, equally competent, perhaps more so, for reasons could produce from the same subject a negative showing no trace of a supposed fracture. With evidence of such a character it was no wonder that the *x*-ray fell into disrepute, especially in legal cases.

At the present time a Roentgen-ray negative that admits of no doubt as to the reading or even the interpretation by judge and jury can be produced by experts.

The mere introduction of a negative, however, should not be sufficient. The ability of the operator to produce as well as to interpret the same should be questioned. The operator himself should be required to testify as to the technique employed, as well as to the developing, especially as to the use of any means whereby the plate has artificially been changed to bring into relief certain features. Again, one view should not be sufficient; two plates with their prints should be exhibited whenever the anatomical conformation of the parts allows it; these two plates should represent views at right angles to each other. In other words, in a supposed fracture of one of the long bones, one view taken antero-posteriorly and the other taken laterally should be exhibited. The force of this statement will become apparent by consulting the plates where, in the one instance, a fracture appears to be present, while in the same bone, observed from a different viewpoint, no fracture is visible.

Again, it is quite possible with the photographer's art to produce what appears to be a typical fracture in a bone where

in reality no fracture exists; in the same manner, a fracture that really exists may be thoroughly retouched and shaded so as to remove all semblance of its existence. When an *x*-ray photograph is, therefore, brought into court, it may be for the sole purpose of establishing the fact that a fracture does or does not exist, or it may be for the purpose of showing to what extent the continuity is severed. A patient may have been treated for a fracture; if an *x*-ray has been taken immediately after putting on the splints and dressings it may show the fracture to be properly coaptated, or through intervening tissues between the severed ends coaptation is impossible; it may be shown that the original treatment was or was not properly carried out. Where, therefore, it is found that complete reduction is impossible, the patient should have the choice of either the open operation or the endurance of such interferences as may be caused later to the function of the limb.

It is exceedingly common that an apparently perfect physiological function has been re-established after a fracture, yet an *x*-ray will show incomplete reduction or severe overlapping of the fractured surfaces. It is well, therefore, that every case of fracture or similar injury be subjected to the *x*-ray photograph, if for no other purpose than future record. The admissibility of *x*-ray photographs under all the above-mentioned circumstances is clearly put forth in the following decision of the court:[1]

"It is within the discretion of the trial judge to admit in evidence an *x*-ray photograph; and his determination whether it is sufficiently verified, or appears to be representative of the object portrayed, and may be thereby useful to the jury, is not open to exception."

For the purpose of elucidation it is well to quote the Hon. W. W. Goodrich, Presiding Justice, Appellate Division of the Supreme Court of the State of New York, second judicial department:[2]

"The general rule with regard to ordinary photographs has long been that, wherever the person or thing would under general rules be relevant if produced in court, or the jury would be

[1] Jameson vs. Weld, 45 a 229; 93 Me. 345; American Digest 1900. A. August to March.

[2] Brooklyn Medical Journal, Dec., 1903.

permitted to see it if convenient, a photograph of such person or thing, if properly authenticated, is admissible when the original cannot be seen. Whenever the jury are likely to be materially aided by the opinions, on matters of fact, of persons specially qualified, they should have them; and, for the purpose of illustrating and making clear the testimony of medical and surgical experts, photographs taken by the Roentgen or *x*-ray process have been admitted as evidence in the courts of several of the States. A reference to these cases will show the present status of the law upon the subject. The first case in which the question arose in this country is unreported, but there is a summary of it in the Chicago *Legal News*. It was decided in Colorado, in 1896, and, in admitting the *x*-ray photograph, the learned Judge Lefevre said:

" 'During the last decade at least, no science has made such mighty strides forward as surgery. It is eminently a scientific profession, alike interesting to the learned and the unlearned. It makes use of all science and learning. It has been of inestimable value to mankind. It must not be said of the law that it is wedded to precedent; that it will not lend a helping hand. Rather, let the court throw open the door to all well-considered scientific discoveries. Modern science has made it possible to look beneath the tissues of the human body, and has aided surgery in telling of the hidden mysteries. We believe it to be our duty in this case to be the first, if you please to so consider it, in admitting in evidence a process known and acknowledged as a determinate science.' "

Again showing the advisability of not only presenting to the jury an *x*-ray photograph, but also and at the same time the operator who took the same, we quote Judge Beard in the case of Bruce *v.* Beall (99 Tenn., 303), September 30th, 1897, decision rendered as follows:

"In the progress of the trial, one Dr. Galtman was introduced as a witness, and he was permitted to submit to the jury an *x*-ray photograph taken by him, showing the overlapping bones of one of the plaintiff's legs, at a point where it was broken by his fall. This was objected to by the defendant's counsel. This picture was taken by the witness, who was a physician and surgeon, not only familiar with fractures, but with the new and interesting process by which this particular

impression was secured. He testified that this photograph accurately represented the condition of the leg at the point of the fracture in question, and, as a fact, that by the aid of *x*-rays he was enabled to see the broken and overlapping bones with his own eyes, exactly as if, stripped of the skin and tissues, they were uncovered to the sight. We might, if we so desire, rest our conclusion on the general character of the exception taken to this testimony, but we prefer to place it on the ground that, verified as was this picture, it was altogether competent for the purpose for which it was offered. New as this process is, experiments made by scientific men, as shown by this record, have demonstrated its power to reveal to the natural eye the entire structure of the human body, and that its various parts can be photographed, as its exterior surface has been, and now is."

In the Pennsylvania courts the above is the sentiment, that whenever the *x*-ray photograph is sufficiently corroborated to the satisfaction of the trial judge it may be admitted as evidence.

Massachusetts, on the other hand, maintains that it is impossible for any one to swear to such facts as the *x*-ray photograph may show, on the ground that no human eye has seen the exact condition as portrayed by the photograph. In our opinion this is stretching and hair-splitting; as physicians we know very nearly the conditions in most cases of fracture or similar injury; when, therefore, the *x*-ray photograph corroborates our belief, we have every reason to think that the conditions as shown by the photograph are actually there. Of course, we are justified in considering the possibility of intentional distortion on the part of the operator.

The highest court of the State of Nebraska maintained that a Roentgen-ray photograph may be admitted as evidence even though the operator was not a physician, but it does maintain that such an operator must be competent and must indisputably assert that the condition, as shown by his *x*-ray photograph, does without reasonable doubt exist.

In the case of malpractice of Carlson *v.* Benton the court decided that a properly taken *x*-ray picture could be offered in evidence, although the operator was admittedly not an expert in this line of work.

Three competent physicians, however, maintained, and their

testimony remained uncontradicted, that the *x*-ray photograph showed exactly the condition they believed to exist prior to seeing the same, and that in their opinion the photograph was a correct reproduction of the anatomical structures there shown. The court, therefore, ruled that the *x*-ray photograph under such conditions was corroborative evidence, and as such was admissible.

RADIO-DERMATITIS.

It is evidently more a certain change or reaction to the *x*-ray that takes place in the tissues than the result of a direct traumatic agent like heat or cold, acid or alkalies, in contact with the tissues. In fact, we may assert emphatically that the so-called *x* ray burn is not in the first place the result of the *x*-ray at all; and, in the second place, the reaction of the tissues is not, in fact hardly resembles, a burn. We must, therefore, state that in reality there is no such thing as an *x*-ray burn.

For the present, then, we will consider a certain reaction which takes place or manifests itself about one week to ten days after a certain patient has been exposed to the *x*-ray.

The *x*-ray as an inducing agent ceases to act the very moment the current is shut off; close examination of the exposed tissues shows absolutely no change, nor for several days after. Whatever then happens later must be in the nature of a reaction, within the tissues, to a something that has been able to call forth such a reaction. Some days after an exposure to an *x*-ray there appear redness, swelling, and pain. These three conditions are the cardinal symptoms of inflammation. We know that inflammation is a reparative process, for no healing ever took place in any tissue or organ without inflammation of a greater or lesser degree being present. This is, then, to all intents and purposes a reparative process or a reaction to an injury. Microscopic sections of tissue reacting to the effects of the *x*-ray show all the characteristic qualities of inflammatory tissue anywhere, with this addition: the various cellular elements seem to be more broken up, the nucleus and nucleolus stain badly or are absent altogether, while the fibrous and protoplasmic constituents of the cell apparently have increased.

The cell elements depend upon the nucleus for their vitality; for the moment the nucleus is destroyed, that moment the cell

disintegrates, other and neighboring cells appropriate the elements set free, and so cause an increase in fibrous-tissue formation.

What, then, has destroyed the nucleus? Whenever an electric current passes through any compound substance, decomposition of the molecules takes place with the setting free of atoms to form new molecules and combinations. If we have in a cylinder two parts of hydrogen gas and one part of oxygen gas, and cause an electric spark to pass through the same, we have at once the formation of a combination of H_2O or water. On the other hand, if a current of electricity passes through water, a decomposition takes place, setting free hydrogen and oxygen. This separation of atoms and recombination to form new molecules is known as electrolysis. Should this process be carried infinitely further, so that even though the oxygen and hydrogen be still further broken up into their component positive and negative ions, we would have ionization taking place.

If there is one agent that possesses the power of ionization to a marked degree it is the *x*-ray. Let an electroscope be charged with either negative or positive ions; the moment the *x*-ray is thrown upon it, even at a distance of eight to ten feet, immediate discharge takes place. There are only a few substances known to possess such a power. Radium in a minor degree possesses the same power, hence its similar action to the *x*-ray. The effects of the application of radium are identical with those of the *x*-ray. Both of these agents possess ionizing power to a marked degree, and we are justified in the belief that the ionizing or decomposing properties of both of these agents are in large measure responsible for the change or the reaction which takes place in the tissues. The only difference between the two reactions is this: radium requires direct contact with the tissues and longer application, while almost the same results might be obtained with the *x*-ray if held at some distance from the parts and in less than one-tenth of the time. This difference must be accounted for. It will not do to say that we have a greater quantity of the *x*-ray than we have in radium, for it has been shown most conclusively that the lower the tube, the fewer and the less powerful are the rays, and the greater is their destructive effect; while the greater and more powerful the *x*-rays the less is their destructive action. It is, then, at least not a question of quantity. We know that

the *x*-ray tube acts as a converter; that is, it converts the high-tension electric current, when passed through more or less of a vacuum, into rays of luminosity. In doing this the tube is surrounded by a static charge; this static charge is again the passing of an electric current through a complex substance, the air; this, as all other substances, follows the law of decomposition and recomposition. There is formed in the immediate neighborhood a large amount of nitrous acid and ozone, both substances markedly irritating to the tissues. Not only that; but this static charge induces through the agency of the dielectric, the air, in the body, currents of electricity of opposite polarity to those surrounding the tube.

When the human body thus acts as a container charged with electricity of polarity opposite to that of a near-by charged body, a stress is set up in the immediate neighborhood, and each cell, as well as the component parts thereof, shares in this stress. Under such circumstances of electrical stress within the cell body the ionizing power of the *x*-ray becomes most energetic. The nucleus of the cell is the trophic element, consequently the most highly vitalized part of the cell, and is therefore affected sooner and to a greater degree than all other parts of the cell. There is still another element to consider that has been lost sight of by most *x*-ray operators: a common law in physics states that arrested motion results in heat.

When a projectile has been fired from a gun, the point of impact suffers according to the speed of the bullet at the time of such impact. A plank is, therefore, not only traversed, but may be set on fire from the friction or arrested motion. The bullet itself may be melted. *X*-ray radiations are matter in motion—in fact, the speed of this motion is enormous; whenever, therefore, the speed is arrested we have the dual effect of the arrested motion and the ionizing property of the *x*-ray. This combined effect, if continued for a sufficient length of time, will destroy the nuclei of the cells most acted upon. These dead nuclei cause disintegration of the cell components. These cell components become dead, putrid, albuminous substances, forming leucomaines to which the system reacts in the usual manner by heat, increased blood-supply, swelling, and pain, or all the ordinary symptoms of an inflammation. If the local vitality is great enough, recovery will take place; if, on the other hand, the local

and systemic reaction is insufficient, necrosis and sloughing of the devitalized tissue is sure to follow.

Now we can account for the various factors entering into the so-called *x*-ray burns. A high tube or one with great penetrating power does not burn so easily, because, in the first place, the tube is kept at a great distance from the body, thereby more or less destroying the inductive influence; secondly, the rays are not arrested superficially, but exercise their effect upon the deeper tissues and cover a greater volume in depth. The ionizing power may be, and no doubt is, even greater than in a low tube, yet no burn is apparent. We know, however, that cell-destruction goes on just the same; which accounts for the death of many patients (with deep-seated or internal malignant growths) from septicæmia, when subjected to treatment by *x*-rays.

Again, when a tube of low penetration is used, it is necessary to bring such a tube rather close to the tissues, thereby subjecting the local area to the inductive influence, plus the arresting of the emanations upon or just below the surface; this, with the ionizing effect of the *x*-ray, is sure to bring about such a reaction in the tissues as has been termed an *x*-ray burn.

The *x*-ray, like any other agent, is capable of calling forth from the system responses differing with the amount and strength of the dose and the individual susceptibility of the patient.

What may be a small or insufficient dose for an immune individual may be an overdose for a highly susceptible or responsive individual.

It was, however, considered of importance to establish a method of measurement and dosage.

MEASUREMENT AND DOSAGE.

Since we cannot take into consideration the personal equation or idiosynerasy of the patient, any system of dosage must lack this essential element and be to a greater or lesser extent useless.

1. An attempt was made to measure the current in the primary of the coil, and so establish the resultant measure in the secondary. It was found that over 50 per cent. of current was lost in passing through the interrupters, that it depended materially upon the speed of the interruptions and the size of wire

and number of turns in the primary. No satisfactory guide could therefore be established.

2. D'Arsonval placed in series with a valve tube a *milliamperemeter*, thus measuring the amount of current that was passing from the secondary through the *x*-ray tube. This instrument, while it records exactly the amount of current passing through the tube, does not inform us as to the amount of *x*-ray conversion. A tube may offer such a high resistance as to allow no current to pass through, as far as the milliamperemeter is concerned, yet such tubes have caused most violent reactions to the parts exposed by the experimenter. On the other hand, with a tube so low as to show a cathode stream and giving a reading of 5 milliamperes no *x*-rays could be detected by the fluoroscope.

3. Béclère, of Paris, introduced the *spintermeter*. This method measured the parallel spark-gap of the secondary; it was then concluded that a given tube, offering a resistance equal to a given spark-gap, was of a definite intensity.

The spark-gap of the secondary depends upon the voltage present; this voltage depends upon that in the primary, and the ratio between the ampere turns of the primary to the secondary. With, therefore, a very high voltage in the secondary, the spark-gap of the tube would differ from that of a coil with a lower voltage in the secondary. Again, frequently a tube with a parallel spark-gap of 2 to 3 inches will give greater penetration than a tube with 5 to 6 inches of spark-gap. This system, like the preceding, does not take into consideration the conversion into *x*-rays of the current passing through the tube.

4. *The Radiochromometer of Benoist.*—Several instruments are upon the market for the purpose of measuring the penetrative power of the *x*-rays.

An arrangement like the dial of a clock is made, each number consisting of layers of tinfoil placed upon each other, so that No. 1 represents one layer of a certain thickness of tinfoil, while No. 12 represents twelve such layers superimposed upon each other. This method does in a measure indicate the depth to which the ray will penetrate, and so materially assists in the selection of a high or low tube. Experiments, however, have shown that the actual power of penetration is not a constant factor with the chemical qualities of the tube. The results of a therapeutic application, as well as the effect upon a sensitized

plate depend principally upon the chemical nature of the ray; only sufficient penetration being necessary to reach the parts to be acted upon; hence the dictum, that a low tube gives a better picture than a high one. The penetration method, therefore, does not furnish us with the necessary information as to the chemical and therapeutic effect of a certain tube.

5. *Chromoradiometer of Holzknecht.*—A capsule made of celluloid material contains a certain salt, whose composition so far has been held a secret by its inventor. This chemical is exposed to the action of the *x*-ray, and, in a certain time, changes its color according to the chemical effect of the *x*-ray. Standards are established by acquired shades of these capsules previously tested. By comparing the capsule which has been placed upon the skin of the patient where the treatment was directed with the standards, it may be stated that a certain number of units of this method constituted the dose employed as compared with a known shade. Like all other methods of a similar nature, this method of arriving at the desired dose does not hold good for all patients, disregarding the fact that the chemicals employed change with age, and that the element of a personal equation enters largely into the color-comparing test.

6. *The Radiometer of Sabouraud and Noire.*—This does not differ from the preceding one, except that the chemical disks used are known to be barium platino-cyanide. It is well known that this chemical changes to a darker hue when exposed to *x*-rays, and again returns almost to its original color when exposed to bright daylight. By comparing a pastille to a certain known shade, the chemical units of the *x*-ray may be established. It is then open to the same objection as the "Holzknecht" method, and even to greater ones, because the disks of barium platino-cyanide are affected by heat, moisture, and light. Sabouraud, however, insists upon one precaution, which it is well to bear in mind at this time, although it will be again referred to. It is this: "If the tube is placed at six inches from the patient, as it should be with his method, the pastilles must be placed midway, or only three inches from the tube; otherwise the disks will change color very much more slowly or perhaps not at all."

7. *The Chromoradiometer of Bordier.*—The chromoradiometer of Bordier differs from the preceding one in some particulars. Bordier recognized the fact that the barium platino-cyanide was

subject to the constant changes previously referred to, as caused by moisture, heat, the dehydrating influence of the *x*-ray, daylight, and strong artificial light. Bordier, therefore, suspended barium platino-cyanide in a solution of flexible collodion, making thin wafers; these were placed upon the skin or in the immediate neighborhood of the part to be treated. A scale of previously determined shades served as an index to the dosage. While Bordier's method possesses points of merit, the same general objections as those against that of "Holzknecht" are, however, present.

8. *The Quantimeter of Kienböck.*—In 1905 all the various methods for measuring the dosage did not appeal to Dr. Kienböck as meeting the necessary requirements; he recognized the utter unreliability of each of the instruments previously described, and originated a new method. It was the intent this time to bring out an instrument which would at once combine the penetrative power with the chemical power of the *x*-ray in its recording element. Strips of paper, sensitized with chloro-bromide of silver in gelatin, were exposed to the action of the *x*-ray; and, after being developed and fixed in the usual manner, these various shades were calibrated into three classes: shade No. 1 representing a very mild dose of the *x*-ray from which no reaction would occur; shade No. 2, a medium dose which would cause a reddening of the skin and shedding of the hair (recovery would usually take place); shade No. 3, a maximum dose which usually brought on symptoms of reaction in four to six days after exposure, with redness, heat, swelling, formation of blisters, and ultimately sloughing of the parts. All the various degrees of dosage between these three were then, at least theoretically, possible. This system, being more complicated than the preceding ones, suffers a great loss in value from the fact that it is necessary to develop and fix each sample before the dose is known; not only therefore causing a loss of time, but involving too many conditions and factors in the developing process to make it of real value. Again, assuming that all the intricacies of the dark-room had been complied with, there would still remain the objection of the element of personal equation in the color-reading and interpretation of the different shades.

9. *The Radiometer of Freund.*—This meter consists of pure iodoform dissolved in chloroform. When this solution is ex-

posed to the action of the *x*-ray, an almost immediate change takes place in the color tint; in fact, this test is so delicate that when this solution is exposed for even three minutes, a distinct difference in color can be seen between a shaded and an exposed portion in a test-tube. The objection to this system is, in the first place, the instability of the mixture; forty-eight hours being sufficient to spoil it for the test, even when most carefully protected from all light. In the second place, it does not record the reaction of the tissues to the *x*-ray and is, therefore, of very little more value than the mere statement that so many minutes with a certain kind of a tube constitute so much of a dose in any given case.

10. *Precipitation Test.*—Schwarz, of Vienna, recognized the instability of the iodoform in chloroform reagent, and set about to overcome this. A mixture of ammonium oxalate and corrosive sublimate contains some calomel, and makes a perfectly clear fluid, which, when protected from the effects of daylight, keeps indefinitely. When this mixture is exposed to daylight or the *x*-rays, cloudiness and the formation of a precipitate appear at once. The amount of precipitation depends upon the luminosity of the *x*-ray. The precipitate can then be estimated by centrifuging in a capillary tube which has been calibrated for the purpose. This entire reaction evidently depends upon the luminosity or light effect, and, as the *x*-rays are invisible, the glass of the tube, its composition, and the thickness of the wall cause the differences in luminosity. This system cannot record the effect of the *x*-ray.

11. *The Ionizing Power of the X-Ray.*—J. J. Thompson as well as Professor Roentgen thought it possible to make use of this power to measure the quality of the ray. For some time, radium, and, in fact, all radio-active substances, have been judged by their ionizing qualities. An electroscope is charged with either plus or minus electricity. It is then brought within the field of *x*-ray influence; and the time consumed in the discharging of the filaments is taken as a unit of measurement. The objection peculiar to this method is that, before the electroscope can be discharged, the air must have been ionized in order to become a conductor of electricity; and as the conditions of heat and moisture vary from hour to hour, the unit established by such a method would be subject to continuous variation. Were it not

also open to all the other objections cited, for this reason alone this method cannot establish a unit.

12. *The Radiometer of Courtade.*—All operators observed the fact that radium, so far as strength and steadiness of radiations are concerned, is practically uniform; it was, therefore, thought that this substance might be useful in furnishing the necessary unit of penetration, as well as of ionizing and chemical effects of the *x*-ray. For this purpose, radium of known strength was fixed upon a screen of barium platino-cyanide, and the *x*-ray was allowed to fall upon the same screen through an aperture made for the purpose. The two illuminations were then compared, and by moving the tube nearer to or farther from the screen, the distance and the strength of the *x*-ray were determined. This again meets with all of the objections above cited, and possesses none of the real merits necessary to establish a system of units.

13. *The Guilleminot-Courtade Modification.* 14. *The Fluorometer of Williams.* 15. *The Method of Contremoulins.*—These three methods are but slight modifications of the original radiometer system. They do not present any special feature of merit without at the same time, by overcoming one obstacle, obscuring other points of value.

16. *The Selenium Cell as a Photometer.*—R. Levy presented at the Berlin Congress in 1905 a selenium cell through which a current from two ordinary dry cells was passing. The current so passing was then recorded by an amperemeter. If this arrangement is brought within range of an active *x*-ray tube, the ionizing power of the *x*-ray changes the resistance within the cell to the passage of the current from the two dry cells. This variation of current-reading is then taken as a guide to the strength of the ray. It must now be borne in mind that, when dry cells are connected in the manner described, there ensues in a very short time a noticeable deterioration of the cells, and the reading will consequently change from time to time, which would absolutely prevent the fixing of a unit.

17. *Dunham's Instrument.* 18. *G. C. Johnston's X-Ray Meter.*—Both of these instruments are modifications of the selenium-cell type with the addition of the fluorescent screen. The luminosity of the screen decreases the resistance in the selenium cell, and allows a greater flow of current during the time in which such a screen is excited to luminosity by the *x*-ray. Here we are in-

troducing still more elements of unknown quantities and doubtful value, on account of their ever-changing proclivities.

It must be apparent from the foregoing *résumé* that the meter for *x*-rays has not yet been found, much as it may be desired. In fact, when such a meter is finally evolved it must of necessity be something entirely different from the present appliances. It should not be inferred, however, that the methods enumerated possess no points of merit, as far as measuring either the penetration, or the chemical qualities, or the ionizing power of the *x*-ray. On the contrary, for the purpose of *x*-ray photography some of these systems for computing the value of, or assisting in the selection of a particular kind of tube have most decided value. Under such circumstances, we are dealing entirely with inert materials; their composition being a known factor, their chemical reaction can be almost mathematically figured out. For therapeutic purposes, however, we are dealing with unknown compositions, therefore unknown reactions, and the lesions or the pathological states are ever-varying factors. It is not, therefore, a system of measuring, nor the establishment of therapeutic doses which is desired, but rather something that will rob the *x*-ray of its undesirable qualities.

If a keg of powder and a lighted candle be kept in the same room, we need not so much a system whereby we may measure the explosion that is liable to occur, but rather something that will eliminate the possibility of such an explosion. We know the keg of powder by itself is harmless enough, and under ordinary circumstances the lighted candle is a source of but small danger. But when these two agents act in concert, there is liable to be discord. In this instance, of course, we are dealing with familiar agents, and the remedy is simple: either remove the powder or extinguish the candle; or, if both must remain, then shield either one or both in such a manner that their united effect cannot take place.

It has been shown that the reaction of normal as well as pathological tissue depends upon the presence of several factors, as the ionizing qualities of the *x*-ray, the penetration, and the chemical effects; all of which are enhanced by the static inductions surrounding the tube. It is a well-recognized fact that when a plate of aluminum is placed between the patient and the tube, especially if the aluminum is grounded, the superficial reac-

tion is materially lessened. The reason for this is twofold: The statie field surrounding the tube exerts its influence upon this shield, instead of upon the patient; secondly, only the more penetrative rays pass through the aluminum, and are therefore not arrested upon the surface of the skin. Again, as Phaler, of Philadelphia, has shown, when a piece of sole leather or a piece of silver is placed in front of an *x*-ray tube, the skin reaction is almost nil, regardless of the dose. The only thing accomplished here is, as with the aluminum plate, an interference with the static induction and the avoidance of arresting certain low rays upon the surface of the skin.

It has been the author's privilege to combine several of these last-named methods into one, and, instead of complicating the results, simplifying them. Let us take a tube made entirely of lead glass; opposite the anode, and at right angles to the cathode stream, is a projection also made of lead glass; which projection is then closed by a window made of crown glass. It must at onee be apparent that such a tube possesses all the requisites of any ordinary tube plus the advantage that no rays will be emitted from the tube anywhere excepting through the crown-glass window. The operator, therefore, is safe to remain in close proximity to a working tube without being himself affected by the ray; which is of considerable importance from a medico-legal point of view, since under such circumstances the operator can remain close to his patient and properly observe the working of the tube at all times. The next point, and of equal importance, is the distance of the tube from the patient. When this tube is placed in direct contact with the skin, we accomplish several very important results: the tube becomes grounded to the patient, thereby doing away in a large measure with the static induction (the static field surrounding the tube), the formation of nitrous acid and ozone, as well as the ultra-violet ray; all of which factors depend directly upon the fine sparks which are continuously leaving the outer surface of the tube. Such an arrangement then robs the *x*-ray of everything save one factor, and that is its ionizing qualities. The very moment that the *x*-ray exerts no action other than to ionize the various substances with which it may come in contact, there exists little or no difference between it and radium. Practical experience has proved this to be a fact. Radium must remain in close contact

with the tissues for hours before any decided reaction will occur. The *x*-ray used under the above-named conditions practically acts in the same manner, and may be left in direct contact any reasonable time without deleterious effect upon sound tissue. Pathological tissue has, of course, not the necessary resistive power, hence breaks down easily under the influence of such an agent, and if a ready means for escape of the broken-down tissue is afforded, there will be no undesirable reaction; on the contrary, many lesions clear up and return to normal the moment all the abnormal cells have been disintegrated. We are, therefore, justified in putting forth the claim that the term *x*-ray burn should be replaced by the term "radio-dermatitis."

THE X-RAY IN THERAPEUTICS AND ITS LIABILITY TO CAUSE DERMATITIS.

An unusually large number of damage suits have occupied the courts during the last two or three years as a result of injuries received from exposures to the *x*-ray. Nearly every known lesion of the skin as well as several constitutional derangements have been from time to time exposed to the influence of the *x*-ray. The fact that the *x*-ray possessed a peculiar influence in its behavior toward the normal skin was noticed, during the very early days of its discovery, by Schiff and Freund, of Vienna.

At that time it was necessary to expose the hand for thirty minutes in order to obtain a photograph of the bones of the hand. After a number of such exposures had been made, a peculiar skin lesion made its appearance, differing materially from any known lesion of a similar nature. It was discovered that the part of the body exposed to the ray showed no untoward effect until a week or ten days after an exposure. The skin became red, with an intense itching or burning, sometimes without any sensation of discomfort; after another week or two, if no further exposures were made, a normal condition re-established itself. If, however, the exposures were continued after this primary reaction, then a more violent reaction took place, blisters formed, which opened (leaving open areas of denuded tissue which refused to respond to all ordinary measures of treatment), sometimes persisting for months and even years without showing any

tendency to heal. Skin-grafting, when resorted to, was seldom successful. Finally, after more or less sloughing had taken place, the area had a characteristic appearance of a mottling of white anæmic and red hyperæmic areas. The white areas were found to be due to scar-tissue formation, a hyperplasia of connective tissue, while the red areas were due to the destruction of the intima of the smaller blood-vessels and the arterioles forming areas of dilated blood-vessels not unlike a telangiectasis.

Later, when the tubes and generating machines were improved, these same lesions appeared even more quickly, if anything, than of old, because the rays were focussed, and they were very much stronger. Many and varied are the opinions as to the nature of this reaction by the tissues to the ray.

1. The Forcing of Metallic Substances into the Skin.—From the fact that an electric current, when passed through any substance, decomposes that substance, some observers were led to think that the metallic terminals within the glass tube became decomposed, that this metal in such a fine state of division could be forced through the walls of the tube and into the tissues, and there set up this peculiar manifestation. Very careful work with the microscope and chemical tests for the metal have failed to reveal even the slightest trace. This theory, therefore, had to be abandoned. Not only that, but any glass wall capable of allowing metallic particles to pass through it, would of necessity allow the ingress of air and so tend to destroy the vacuum, which, as we know, does not take place. On the contrary, the newer the tube the quicker it will cause a reaction, while the more seasoned the tube the less liable it is to cause a burn.

2. Ultra-violet Rays.—Some observers, especially Stine and Goldstein, as reported by Holzknecht, suppose that the ultra-violet rays generated in connection with an excited *x*-ray tube, and not the *x*-ray, were the causes of the burn. When, however, we stop to reflect that the ultra-violet rays refuse to pass through glass, we are limited to the violet rays formed upon the outside of the tube during action. The electric current passing through the tube sets up a static field around the outside; this static field, the same as all high-tension discharges, produces a certain amount of the ultra-violet rays on the outside of the glass sphere. If this supposition, however, were true, then we

ought to produce a large amount of burning in the tissues when the spray is used from a metallic conductor or from the glass-vacuum, high-frequency electrodes. Such is not the case, and the ultra-violet may therefore be considered as not the prime agent in the production of the burn.

3. Cathode Rays.—Before Roentgen's discovery of the *x*-ray, Lenard studied and experimented with the cathode rays; he found that they would not pass through the glass walls of the tube, though they could be bent out of their path by the action of a strong magnet. Before Lenard could properly study the cathode rays, it was necessary to insert an aluminum window into the side of the glass tube to allow these rays to pass outward. Lenard demonstrated their effect upon the negative photographic plate, upon various salts, etc., but does not record any untoward effect upon the tissue. It must, however, be borne in mind at this time that when the cathode stream is most abundant, as in a tube with a low vacuum, where the *x*-rays are few, we have the greatest liability for burns.

The moment the cathode stream ceases to exist, the *x*-rays increase in number, and the liability to produce burns disappears in exact ratio. It is necessary then to consider either a tube with a low vacuum or the cathode rays at least component factors.

4. The Static Field Surrounding the Tube.—*The Electrical Review*, January 5th, 1898, published an article to the effect that Rollins exposed his hand to a tube, the vacuum of which was so high that no current would pass through it, consequently no *x*-rays were generated, yet he sustained a severe burn of the hand exposed. This experiment would lead us to consider the static field as a contributory agent only, because the same static field exists in the neighborhood of all high-tension apparatus, yet no burn results from the static induction alone; another element or several are necessary to produce such effects.

5. The Production of Ozone upon the Skin.—Whenever electrical discharges take place in the air there is a formation of ozone and nitrous pentoxide. Either one or both of these substances may accumulate upon the surface of the skin, and cause more or less local reaction, that differs, though, materially from that state or condition known as the *x*-ray burn. The ozone and acid effect would take place almost at once and would

of necessity be limited to a surface action, while the *x*-ray burn does not show any immediate effect; days and weeks may pass before the first symptom is manifested. Again, the *x*-ray burn seems to begin in the deeper tissues and work outward, while the effects from an agent like ozone or an acid would work from the outside inward. Tesla held that the ozone and the nitrous acid were responsible for the burn, he, therefore, placed between the patient and the *x*-ray an aluminum shield; this seemed to lessen the burning qualities very materially. Later, in order further to increase the protecting value of such a metallic screen, a chain or metallic grounding was connected with the aluminum plate for the purpose of doing away with the static-induction influence as well as protecting against the ozone and nitrous-acid formation upon the skin. This combined procedure seemed to lessen the number of burns, still a certain number would appear with unpleasant regularity; we were forced to the conclusion that all the factors had not yet been eliminated.

6. Idiosyncrasy.—All *x*-ray operators are agreed upon one fact: that all persons do not offer the same susceptibility to the *x*-ray. This, of course, is not strange, since it is an accepted dictum in medicine that no two persons react alike to either infection or therapeutic measures. Unfortunately, it is impossible for the physician to know in advance which person is destined to be burned with a minimum dose and which patient may not be affected at all with even massive therapeutic doses, so that when the idiosnycrasy is discovered the burn is present.

7. Faulty Technique.—As has been pointed out, there are certain conditions that seem to be more or less directly connected with the production of *x*-ray burns. First among these is the presence of the cathode stream, which means very few *x*-rays or a tube with a very low power of penetration. A so-called soft tube will cause a reaction more quickly and oftener than a hard tube. When, therefore, a soft tube is used the time should be accordingly shortened. Again, sufficient time should be allowed between the treatments, since the effect of the raying may not show for several days after the exposure, and the undoubted cumulative effect thereby avoided. Whatever may be faulty technique in one instance may be absolutely correct technique in another, and *vice versa*. The general rules in medicine apply as much here as elsewhere. A healthy, robust person would be expected

to resist the action of the *x*-ray more than a sickly, delicate person. Blondes seem to burn more quickly than brunettes; in fact, the action of the *x*-ray, generally speaking, is much like that of the sun's rays: some persons become severely burned and never tan, while others tan only and seldom or never suffer from actual sun-burns.

THE PHYSICIAN'S RESPONSIBILITY IN CASES OF X-RAY DERMATITIS.

Shortly after Professor Roentgen showed to the world the possibility of photographing the hitherto unseen structures of the human body, a peculiar form of dermatitis made its appearance.

All those who were interested in this newly discovered agent, especially for photographic purposes, noticed, usually about one week or ten days after an exposure, a reddening of the part so exposed to the *x*-ray.

During those days it was necessary to expose a hand for thirty minutes in order to produce the proper effect upon a sensitized plate. It is therefore no wonder that dermatitis was rather the rule than, as it is to-day, the exception. Schiff and Freund, two Vienna dermatologists, became much interested in this new disease of the skin; from its resemblance to an ordinary sunburn they gave this lesion the term *x*-ray burn.

We recognize two conditions of this lesion. In one instance it is the result of a diagnostic examination, in which instance one of two factors, or perhaps both factors, operated. Either the exposure was too prolonged, or the patient was possessed of a marked idiosyncrasy to the ray. In either case a radio-dermatitis may result, and, according to the conditions present, go through its various stages, lasting from a few days to months and even years before recovery takes place.

Whenever therefore a radio-dermatitis follows as the result of the use of the *x*-ray, it is always unintentional but not always unavoidable. This is especially the case in patients who are inclined to an over-amount of fatty tissue as well as in those who suffer from water in the tissues, either general or local dropsies, and œdematous swellings. Whether the tissues just enumerated are under such conditions more responsive, or whether the inter-

ference with the local circulation and depressed state of the part under examination is responsible for the greater reaction, is at present mere conjecture. The fact, however, remains that all tissues devitalized by trauma or other agencies respond physiologically to the action of the *x*-rays sooner than normal tissues. Another element enters into consideration here and that is the time necessary for the exposure. When such factors as fat, serous effusion, pus, water, or even congestion in any part under examination exist, there is an obscure shadow upon the fluoroscope, and it is necessary frequently to prolong the time of exposure beyond the limit of safety. In fact, it often happens that a diagnosis cannot be made with the fluoroscope. It is better practice, therefore, to waste no time in exposing a patient under such circumstances, but after the first look at once take a radiograph. With all these precautions there is still a possibility of causing an accidental dermatitis as the result of exposure to the *x*-ray for diagnostic purposes.

In the second condition the ray is used for therapeutic purposes. Under certain circumstances, with lesions of a degenerative type, especially where the skin has already broken down, it seems logical at least to attempt to set up a certain amount of reaction in such tissues. Should such a reaction from any cause get beyond the control of the operator, or spread to neighboring parts, a radio-dermatitis would be the result. On the other hand, if sound skin is overlying a pathological condition, and in the attempt to affect this deeper-lying tissue the skin becomes involved as the result of the use of the *x*-ray, then we have again produced a radio-dermatitis, which can in no way assist, but rather retard the effect of the *x*-ray treatment in such a case.

It is therefore evident that there exist two distinct classes among *x*-ray malpractice suits: the one where the ray is used for diagnostic purposes, and the other where it is used as a therapeutic agent. In the application of the principles of law, no distinction can be drawn between these two classes, and while the legal rules are plain, concise, and adequate, yet it is sometimes difficult to apply the rules to the case in hand.

Personal responsibility and liability to a patient for damages caused by the use or misuse of the *x*-ray rest upon the same principles of law as any other branch of medicine or surgery. The same rules, so far as malpractice is concerned, must be ap-

plied as laid down in our court of last resort, to guide the medical and surgical practitioner.

Illustrative of these two great classes, the following are representative:

THE X-RAY USED FOR DIAGNOSTIC PURPOSES.

In April, 1901, an action was brought by a brewer living in Brooklyn against a surgeon who has become eminent in his profession and now resides in Manhattan Borough, for $50,000, to recover damages for a so-called *x*-ray burn received on his abdomen while the operator was attempting to confirm a diagnosis of a calculus in the kidney. The result of the examination with the *x*-ray, so far as it was confirmatory, was unsatisfactory, though there appeared a slight shadow on the plate. The skiagraph, however, was never considered of sufficient value to warrant an operation into the abdomen. The patient was a strong adult weighing approximately 250 pounds, and the apparatus used was one of the earlier Crookes tubes energized by a coil from a street current.

There is no doubt but that the patient was burned, and it is certain that the appliances in use at the time that the action was brought (1901) for protecting the body, the proper distance from the tube as laid down in the earlier writings of the English and German authorities, and the ordinary time of exposure were used; in fact, every precautionary measure was adopted, yet the patient was burned. The suit followed and was successfully defended.

This action was the pioneer case, so far as I have been able to learn, in the United States, involving this question of the use of the *x*-rays for diagnostic purposes, and the rules of care and caution ordinarily applied were used in this case.

THE X-RAY USED AS A THERAPEUTIC AGENT.

This case was in many respects a very peculiar and extraordinary one, as it evidenced the astonishing personal and individual idiosyncrasy which must always be considered in the application of *x*-rays.

The patient in this case was a man about seventy years of age, residing in New York, and was treated with the *x*-rays for

locomotor ataxia following syphilis, and two questions were raised by the plaintiff in his pleadings, first, as to the propriety of the treatment, and second, lack of experience of the operator. It was claimed by the patient that he was exposed to the *x*-ray for upward of thirty minutes, on two different occasions, with the tube within an inch or two of his back, and that the operator left the room. It was also charged by the patient that the operator had not sufficient knowledge of the mechanical part of his work properly and safely to apply the rays.

The action involved $25,000 and was successfully defended. It was begun in April, 1904.

It was claimed and affirmatively proved by the physician that he exposed the patient's back to the rays for from ten to twelve minutes, at a distance of about eight inches, and that he moved the tube up and down the entire length of the spine, and that this exact treatment had been repeated after the expiration of three days.

It appeared that the patient returned in about eleven days with what seemed to be the very mildest form of an *x*-ray dermatitis. The patient was then told that he was extremely susceptible to the rays and that the treatment would be discontinued, and thereupon local treatment was applied for the purpose of relieving the dermatitis.

The appearance of the skin, however, and the symptoms attending it were not relieved by treatment, and a slight dermatitis continued for upward of five months without change. At the end of five months, and without apparent reason, there appeared in the area marked by the dermatitis a small abrasion of the skin, which was promptly followed by a necrotic condition, ulceration, and gangrene, which subsequently and after careful and extended treatment was healed.

When the case was brought to trial the patient's back was exhibited to the jury and disclosed a scar over the length of the spine, two inches wide by sixteen in length. The scar itself afforded conclusive proof that the operator had moved the tube up and down the spine. The general condition of the patient was improved.

It appeared at the trial of the action that the operator had had a very wide experience in the treatment of diseases of the skin, that he had applied the *x*-ray several thousand times, and

that the machine made use of was the ordinary static machine in use to-day, which he had purchased some few months before the patient came to him for treatment.

The grave question involved in this case was the propriety of the use of the *x*-ray in a case of this kind, tabes dorsalis.

Scientific experimentation with the *x*-ray for improvement of this condition has been reported, and experienced writers have published in standard works clinical histories of the successful application and beneficial results in this disease, but the uncertain question is whether or not the therapeutic value of the *x*-rays is of sufficient certainty or efficacy to bring it within the rule of responsibility as an approved method of treatment.

The Court of Appeals say that the physician is bound to keep abreast of the times, meaning that he must possess and make use of such medical literature as would keep him in pace with medical and surgical progress, and continues, "And a departure from the approved methods in general use, if it injures the patient, will render him liable, however his intentions may have been."

Assuming that the operator uses an approved tube, approved machine, at an approved distance, for an approved time, has the treatment itself been sufficiently approved and in general use for the exact purpose to which it is applied, and can it be safely said that it has been accepted and approved by those conversant with the use of the particular agent of cure, and that it is as certain in its beneficial results as many of the surgical and medical agents have now been proven to be?

In the second class of cases we find still another subdivision, namely, those cases or pathological conditions where the use of the *x*-ray has been generally acknowledged, by those who are in a position to know, as a superior agent or means of treatment; yet during an application or as an after-result a radio-dermatitis is established, causing the patient pain and leaving more or less disfiguring scars. The following case will bear more or less directly upon such a condition.

In the early part of the year of 1907 a New York physician became the defendant in a suit for $10,000 damages as the result of *x*-ray treatment for tuberculous glands of the neck.

The plaintiff, a young woman domestic, claimed, and her appearance seemed to bear out her statements, that she had suffered

the loss of her hair on the left side of the head as well as having been severely burned over the entire left side of her face.

The Facts.—The patient some time prior had suffered from tubercuIous glands of the neck upon her left side; these were removed by operation. A large scar was visible as the result. Subsequently the glands upon her right side began to enlarge; the patient was advised to have a similar operation performed; she refused this, she having become possessed of the knowledge that the *x*-rays were satisfactorily employed in such conditions.

In 1903 the plaintiff applied at a hospital clinic for *x*-ray treatment. After several exposures a slight dermatitis developed; the patient was advised to discontinue the treatment until the reaction should have disappeared, which took about two weeks.

As soon as treatment at the clinic was resumed the plaintiff engaged the services of the defendant in this action, and both physicians treated the patient contemporaneously, each remaining in total ignorance of the other's treatment.

In the fall of 1903 she had three treatments from the defendant at intervals of about ten days. A 16-plate Waite and Bartlett machine was used, with a five-inch General Electric tube. The surface of the tube was not less than eight inches from the plaintiff's neck, and the exposure on each occasion lasted eight minutes. Her head and shoulder were protected by sheets of lead foil, with an aggregate thickness of about one-twelfth inch. Four or five days after the third treatment a dermatitis of the second degree began to develop, extending from the bottom of the neck to above the ear, and embracing the whole left cheek. She called on the defendant, who prescribed an antiseptic dressing and urged her to call again in a day or two. He saw her only once more, about ten days later, when the wound was purulent and dirty, and the hair about the ear had fallen.

At the time of the trial she had a network of telangiectases over the glands in her neck and extending into her cheek, and a slight sclerosis behind the ear. Her hair had grown again. The glands were still slightly enlarged on both sides of the neck. She had been examined in October, 1904, after suit began, and it appeared that the telangiectases had increased considerably since that time. She had had further *x*-ray treatment from a third physician in the interval.

The Expert Evidence.—The evidence of experts on both sides was that the duration of the treatment and the distance of the tube from the neck were regarded as safe, that the static machine was deemed safer than a coil, that the quantity and quality of the *x*-ray continually varied, not merely from day to day, but in the course of a single application, that the protection by a lead sheet was the best known to science, and that no means was known to science of accurately measuring either the quantity or quality of the *x*-ray.

The Law.—On this state of facts the judge charged the jury upon the question of the physician's duty according to the familiar rule (Pike *v.* Honsinger, 155 N. Y., 201). First, he must possess "only that reasonable degree of learning and skill relating to *x*-ray treatment commonly belonging to a physician and surgeon using the treatment in the city of New York in November, 1903." Second, he must use "only reasonable care and diligence in the exercise of his skill and the application of his learning in the treatment by *x*-ray." Third, he was bound to treat the plaintiff "according to his best judgment." The judge pointed out that the defendant was here charged with negligence or breach of duty only in the actual treatment, the second branch of the duty imposed on him by law, as above defined. The possession of adequate skill and learning, and the exercise of best judgment were thus not in the case. Reasonable care and diligence in the treatment meant "such ordinary care and diligence as is usually given by a physician in good standing. It does not mean the highest possible care and diligence, or such care and diligence as might have been used by some other physician, or even by the defendant himself." The physician is not an insurer or guarantor, and "in *x*-ray he does not insure the patient against a burn."

The part of chief significance, however, was that in which the judge dealt with the doctrine known as *res ipsa loquitur*. Briefly stated, that doctrine means that the accident and the surrounding circumstances speak for themselves, and afford *prima facie* proof of negligence. A common instance of the application of the doctrine is found in a railroad collision between two trains. The court knows, and everybody knows, that when trains are operated with ordinary and reasonable care they do not collide, and the mere fact of a collision, therefore, affords evidence of negligence;

the accident speaks for itself. But the court here holds that the mere happening of an *x*-ray burn is not evidence of negligence, and it reached the conclusion doubtless in view of the evidence of the uncertain state of *x*-ray science and by analogy to cases of bursting flywheel of an electric machine, bursting oil tank, etc. (Piehl *v.* Albany R. R., 30 App. Div., 166; affirmed, 162 N. Y., 617; Losee *v.* Buchanan, 51 N. Y., 76; Cosulich *v.* Standard Oil Co., 128 N. Y., 103). In cases of this kind the accident does not speak for itself, because it may happen notwithstanding the use of reasonable and ordinary care. In the case of the bursting flywheel, Judge Landon, afterward of the Court of Appeals, said the doctrine of *res ipsa loquitur* did not apply: "Because such are the limitations upon human foresight that every reasonable care does not always prevent accidents, and that such is the nature of steam and electricity, and the engines by or upon which they operate, that when such an explosion as this occurs our experience, or even expert experience, is not sufficiently uniform to justify us in presuming that negligence is the cause. The explosion does not, in fact, speak for itself and tell us its cause."

If this is true of steam and electricity, *a fortiori* it is true of the much more uncertain science of *x*-ray. Upon this subject the judge charged as follows: "If the jury find that the plaintiff received the burn of which she complains in consequence of the treatment by the defendant, they cannot infer that the defendant was negligent merely because the plaintiff afterward suffered from *x*-ray burn, for the cause of the burn may be beyond human knowledge, and even expert experience may not be sufficiently uniform to indicate a sure means of preventing it. Owing to the limitations of human knowledge, the exercise of every reasonable care does not always prevent accidents, and this is especially true in dealing with such comparatively little known forces as electricity and *x*-rays. The jury cannot find the defendant guilty of the negligence alleged in the complaint unless it can find in the proofs some particular act of negligence which caused the burn. To punish the defendant because he cannot explain the cause of the burn is not necessarily to punish him because he has done wrong, but may be to punish him because he does not know something which science cannot find out or has thus far been unable to find out."

This charge is the only judicial expression of the law of this

State upon this subject so far as the reports show. It appears to be logically deduced from the analogies above referred to.

Naturally there are several other elements which enter into the application of the *x*-ray, depending on the purpose for which it is applied as a therapeutic agent. The question of the tube, shield, time of exposure, repetition of treatment, all these are elements which must be considered; but assuming that the operator has sufficient experience and has acquired sufficiently accurate knowledge of the mechanical parts, in order that the operator may avoid responsibility in a bad result, there must be an acceptance and approval of the treatment by the profession generally, otherwise damages may be demanded, however good the physician's intentions may have been.

MEDICO-LEGAL EXAMINATION OF

BLOOD AND OTHER STAINS,

AND OF THE HAIR.

BY

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THE MEDICO-LEGAL EXAMINATION OF BLOOD.

EVIDENCE AND MATERIAL GATHERED BY THE EXAMINER.

The relations of blood-stains found in the locality of a homicide, on the body or clothing of the victim, or on the person or belongings of the suspect, have so often yielded vital evidence that much responsibility falls upon the one whose duty it becomes to collect such evidence.

The examination of the premises should be directed to all articles containing material which in any respect suggests the presence of blood, and this task may involve considerable knowledge of the physical changes to which blood is susceptible. It should not be undertaken in poor light, and it may perhaps be made with advantage by artificial light, judging from the frequently cited report of Ollivier and Pillon,[1] who by lamp-light detected numerous small shiny blood-spots which were overlooked by day.

The number of blood-spots to be expected in the vicinity of a homicide will depend on the nature of the wounds inflicted. Severed arteries spurt widely, ruptured veins distribute much blood over smaller areas, and while crushing wounds may not be followed by external hemorrhage, blood may be thrown several feet by repeated blows in bleeding tissues (Piotrowsky).[2]

It must not be supposed that blood-stains must necessarily be found on the person of the assailant in a bloody encounter.

The natural direction of spurting blood is away from the hand guiding the instrument; an experienced person may cleverly avoid contamination, or thoroughly remove any spots received; criminals have been known to strip to the skin before attempting murder, or to supply themselves with overalls (Taylor).[3]

[1] Ollivier and Pillon, Archiv. gén. de Méd., 1833, 2e S., T. 1, p. 431.

[2] Piotrowsky, Virchow's Jahresber., 1895, Bd. i., p. 449.

[3] Taylor, "Medical Jurisprudence," Phila., 1883, vol. i., p. 523.

Fatal blows may be delivered by blunt instruments without the shedding of blood, contact with clothing may remove all or nearly all traces of blood from sharp instruments, and Caspar[1] believed that a suicide once cut his throat with a sharp carpenter's knife which was found entirely free from blood.

The possibility of cleansing weapons once saturated with blood will depend on the character of the weapon, but some traces of blood will usually cling to cracks and crevices of most knives and instruments, and resist all but the elaborate methods of cleansing.

On the other hand, the presence of several minute blood-stains on the clothing should not necessarily be regarded as indicating the commission of crime. Small blood-stains on the underclothing, cuffs, collar, neck-band are very frequently seen, especially in the lower classes of society, as a result of scratches, small wounds, crushing of insects, slight epistaxis, etc.

The location of blood-spots is often of great significance. In a case of Taylor's[2] the question of murder or suicide was determined by the discovery on the back of the left hand of a victim of cutthroat of the bloody print of the murderer's left hand. Hoffmann[3] reports the significant discovery on the neck, both arms, and shirt of an apparent suicide by hanging, of blood-spots and the bloody hand-prints of an assailant.

The entire locality should be searched for more distant evidences of a bloody encounter.

Taylor[4] reported a case in which the autopsy indicated death by fracture of the skull from a fall down cellar stairs at the bottom of which the body lay, but the discovery of spurted blood-spots on the wall at the head of the stairs led to the demonstration that the chief wound of the scalp was incised and through the temporal artery. In numerous reports in literature significant evidence was obtained in the discovery of bloody foot-prints, hand-marks, finger-prints, and blood drops, at a distance from the dead body, and much care had to be exercised in determining whether or not these stains were made by attempts at suicide, by a murderer, or by other parties coming upon the scene before the blood was dry.

[1] Caspar, "Handbook of Forensic Med.," 1895, vol. ii., p. 168.

[2] Taylor, "Med. Jurisp.," 1883, vol. i., p. 522.

[3] Hoffmann, "Lehrbuch d. gerichtl. Med.," 1903, p. 421.

[4] Taylor, *ibid.*, p. 521.

The form of the blood-spots and their relation to each other may signify the direction and, to some extent, the distance from which they came.

The appearance of blood when smeared over an object needs no description. Objects touched by fluid blood receive stains with smooth outlines. Blood dropped perpendicularly on a hard smooth surface begins to spatter when the height reaches

FIG. 28.—Blood Spatters on Paper. Natural size. (Wood.)

three or four inches, but may not spatter from a height of two or three feet. Dropped from a few inches on glass, the drop is compact with smooth edge; from a few feet, the drop is flatter, the edges may be moderately indented, and minute outlying drops may be present. Blood drops thrown obliquely against a surface assume a characteristic pear shape, the base being nearer the source and the stem being formed by those portions of the drops which fail to cling to the surface first encountered and are projected along sometimes for an inch or more. The length of these stems may indicate the speed of the drops. Blood falling

on a vertical surface flows down till it clots, leaving a thick lower rim and a broad but thin streak above.

EVIDENCE OFFICIALLY HANDED TO THE EXAMINER.

The medical examiner usually first sees articles requiring examination when they are handed to him by officers of the court. Such articles should always be received in person, and the date of their receipt, the condition of the packages, and the name of the officer should be noted. They must be kept in the custody of the examiner under lock and key and not exhibited to any one without an order of the court. A thorough preliminary examination should promptly be made of all the articles, and the naked-eye appearance of all the important features and possible blood-stains recorded. A hand-glass is of value in this examination.

If spots are removed from any articles, their exact location should be noted. As the serum reactions of blood are slowly altered by prolonged contact with certain woods, earths, metals, and leather, material on such articles should be removed as soon as possible and kept in vials apart from light, heat, and moisture.

SCHEME OF EXAMINATION.

The systematic examination of blood-stains involves:

(1) **Gross Examination.**
(2) **Microscopical Examination.**
(3) **Guaiac Test.**
(4) **Hemin Test.**
(5) **Spectroscopic Examination.**
(6) **Serum Test.**

GROSS EXAMINATION.

The extremely characteristic qualities of fresh or recently shed blood are so greatly altered by exposure to the elements, by drying, heat, moisture, bacterial decomposition, and the action of chemical agents that the identification of old blood and the explanation of its changes require a considerable knowledge of the composition and properties of this fluid tissue. Only such portions of the subject will be considered which directly concern the medico-legal expert.

COAGULATION.

Shed blood on exposure to air promptly clots with the formation of fibrin which develops from the action of the fibrin ferment upon fibrinogen, a fluid protein of the blood-plasma.

The fibrin ferment is contained in the leucocytes and red cells (or their derivatives, the blood-plates), and while there are considerable variations in the quantity of the fibrin ferment in health and disease, the resultant influence on the clotting of the blood is rarely of importance in medico-legal examinations.

Normal human blood begins to clot in about two minutes after shedding, and the process is complete in from seven to ten minutes, but the duration of the process depends much upon the quantity of blood and the surrounding conditions. The blood of cold-blooded animals clots slowly, while that of birds clots much more rapidly. The blood of the fowl begins to coagulate in 1.5 minutes; that of the pig, sheep, and rabbit in .5 to 1.5 minutes; that of the dog in from 1 to 3 minutes; horse and beef, 5 to 13 minutes (Nasse[1]).

Coagulation is hastened by temperatures between 37° and 50° C.; by exposure to air, as when it collects in small amounts or in shallow containers; by dilution with less than twice its bulk of water; by contact with corrosive chemicals or rough surfaces; and by agitation or stirring.

Coagulation is delayed by cold, and fresh blood drawn in test tubes and immediately cooled to 0° C. remains fluid for an hour or more, while heating such a specimen to 56° C. destroys the fibrin ferment and prevents coagulation. Blood is permanently kept fluid by addition of neutral salts, as sodium or magnesium sulphate or ammonium oxalate, since they combine with the calcium salts of the plasma which are necessary for coagulation. Contact and especially covering with oily, waxy, or syrupy substances delays coagulation.

It will be seen that blood which requires medico-legal identification has usually been exposed to conditions which favor its coagulation, considerable dilution with water being the only frequent exception.

After clotting the fibrin slowly contracts, pressing out drops of serum after fifteen to twenty minutes, and continuing to expel

[1] Nasse, Wagner's "Handbuch d. Physiol.," 1842, vol. i., p. 75.

serum for several days if desiccation is prevented. This contraction diminishes the bulk, but not the area of the original mass. The progress of desiccation is influenced by the humidity and temperature of the atmosphere, and by the character of the surface receiving the blood. Blood dries more slowly than water on account of its viscous character.

Wood's[1] experiments showed that a drop of blood falling from the finger upon smooth glass, and forming a spot $\frac{3}{8}$ inch in diameter at 71° F., began to show contraction of the edges in 10 minutes; the outer half of the drop was partially dry in 35 minutes, and the whole drop completely dry in 70 minutes. On cotton cloth a similar drop was completely dry in 30 minutes. On a smooth, soft pine board at 65° F., the drop remained unchanged for 30 minutes, began to shrink in 1 hour, and the moist appearance at the centre disappeared in 2 hours. Larger quantities of blood dry much more slowly.

When blood falls on a smooth vertical surface, coagulation does not occur until the fluid portions have gravitated to the lower edge of the spot; but if the surface is rough, rapid coagulation usually prevents this gravitation, and the drop is more uniform in thickness.

Dried blood is stiff and extremely brittle, and flexible materials saturated with it have a peculiar stiffness like that of heavily starched cloths. On manipulation the stiffness is only partly destroyed and the blood breaks off in fine scales.

Blood mixed with mucus or pus is usually rendered more cohesive, does not spread, flow, or spatter like pure blood, and on drying is usually more irregular and compact. Blood diluted with watery fluids yields broad, pale, thin spots with denser edges.

Dry blood-stains on cloths usually require very thorough washing to remove all traces of blood pigment, and the faint outlines of such stains can frequently be detected on white cloths after the ordinary cleansing of the laundry.

The outer edge of such washed stains is usually more distinct than the centres.

[1] Wood, Witthaus and Becker, "Medical Jurisprudence," etc., 1st ed., vol. ii., p. 11.

COLOR AND AGE.

Arterial blood is bright crimson, venous blood dark crimson, and capillary blood presents an intermediate shade.

Very light cherry-red blood is seen in cases of CO poisoning, chocolate color in poisoning by phosphorus, potassium chlorate, and coal-tar products. In anæmia the blood is pale, and in asphyxia it is very dark. Yet the original color of the blood can seldom be traced in the dry blood-stain, since exposure to air transforms all blood to a uniform dark-red shade, which becomes progressively darker with age and finally almost black. As this process is very slow and subject to many disturbing influences, it is very difficult to determine the age of a stain from its color. The solubility of the albumens and pigments is a more reliable guide to the age of the stain. A large stain six months old which had saturated a coat was found by the writer very dark on the outer side of the cloth, but much brighter on the inner side where it was protected by several layers of lining. Exposure to sunlight may bleach the pigment.

Hammerl exposed a piece of blood-stained linen to direct sunlight for five days, when its upper surface exhibited a faded gray color, and after three weeks neither red cells nor crystals could be obtained.

According to Pfaff[1] some indication of the age of blood-stains on cloths may be obtained by noting their solubility in dilute arsenious acid (1–120) which dissolves fresh blood in a few minutes; after 1 to 2 days in 15 minutes; after 8 days in 30 minutes; after 2 to 4 weeks, in 1 to 2 hours; after 4 to 6 months in 3 to 4 hours; after 1 year in 4 to 8 hours. Tamassia,[2] however, found that Pfaff's scale is quite unreliable. Dragendorff[3] states that the fibrinous coagula of fresh clots decolorize in chlorine water in about 1 hour; after 6 months in about 2 hours; after 8 months in about 4 hours; after 1 year in about 5 hours.

Conclusions regarding the solubility of old and altered blood-stains have depended chiefly on the method used to determine the results of attempted solution. Heating to 135° to 143° C. prevents the guaiac reaction, and at 140° to 145° C. Teichmann's

[1] Pfaff, Vierteljahr. f. ger. Med., 1862, Bd. xxi., p. 266.

[2] Tamassia, cit. by Southerland, "Blood Stains," 1907, p. 5.

[3] Dragendorff, Maschka, "Ger. Med.," 1881, Bd. i., p. 500.

test usually fails (Hammerl[1]). Southerland,[2] however, obtained hæmin crystals from stains heated 2 to 3 hours at 140° C. Katayama[3] found that dried blood on porcelain heated to 100° C. for one hour was soluble in distilled water in 24 hours; heated to 120° C. for one hour, it required for solution 24 hours in strong caustic potash or glacial acetic acid, or a week in ammonia, cyanide of potash, or dilute sulphuric acid and alcohol; while heated to 140° C. for one hour, it yielded only to strong potash or glacial acetic acid. Yet Mirto[4] found blood heated to 120° C. for one hour, 130° C. for 30 minutes, or to 150° to 160° C. for 10 to 15 minutes, is still soluble in normal salt solution, as determined by the precipitin test. In experiments of Hammerl, exposure to direct sunlight for 7 to 8 hours daily rendered blood on linen insoluble after 3 days in distilled water, after 6 days in ammonia, after 16 days in cyanide of potash, while after 3 weeks Teichmann's test failed, but glacial acetic acid gave a solution permiting spectroscopic analysis. Concentrated sulphuric acid will always extract pigment from heated stains, and this solution will always give the spectrum of hæmatoporphyrin (Wood[5]).

SUBSTANCES RESEMBLING DRIED BLOOD.

There are many substances which resemble blood-stains, some of which may be excluded by a careful gross examination, while others require microscopical or chemical tests for their identification. It is usually desirable to determine positively the nature of such materials.

Iron rust varies greatly in its appearance, and some forms closely resemble dried blood, but it seldom presents a dark red and glazed appearance. Knives used to cut acid fruits may present dark reddish stains resembling blood, but containing dried vegetable cells colored with iron salts. A microscopical examination reveals absence of red blood cells and the presence of vegetable cells and detritus. The presence of iron may be determined by dissolving the stain in warm HCl, and adding a drop of potassium ferrocyanide which yields the Prussian-blue reac-

[1] Hammerl, Vierteljahr. f. ger. Med., 1892, Bd. iv., p. 44.

[2] Southerland, "Blood Stains," New York, 1907, p. 8.

[3] Katayama, Vierteljahr. f. ger. Med., 1888, Bd. xlix., p. 269.

[4] Mirto, Riforma Medica, 1901, pp. 855, 866.

[5] Wood, This Work, 1st ed., vol. ii., p. 17.

tion. As salts of iron are employed as mordants, this test should be controlled by applying it to unstained portions of any colored cloth on which the stain may be found.

Vegetable dyestuffs and extracts of tan bark may produce stains resembling dry blood. Most of these contain tannin, which blackens when to a solution of the stain is added a drop of tincture of iron. Extract of logwood becomes reddish on addition of mineral acids, and blue with alkalies. Most of the bright red dyes become deep red on addition of ammonia. Madder is changed to a yellow color by acids, and brown by tincture of iron. Vegetable dyes are bleached by chlorine water, which, if not too strong, has little effect on blood. Fruit, tobacco, and other vegetable stains are best identified by microscopic examination and the detection of characteristic vegetable cells. Spots of grease and tar are insoluble in water or in acids, but dissolve in naphtha, turpentine, or xylol. When a piece of filter-paper is pressed over grease spots with a hot iron, the paper absorbs some greasy material.

Red paint can usually be detected by its color. It is insoluble in water, but soluble in naphtha and turpentine. It usually contains red oxide of lead or iron.

MICROSCOPICAL EXAMINATION.

By the use of the microscope the examiner is enabled to identify any red blood cells that may be present, to determine the probable origin of these red cells, the presence and probable origin of leucocytes, and the nature of any material with which the blood may have been mixed or for which it may have been mistaken. Since the microscope furnishes extremely definite and reliable information regarding the minute characters of the material examined, it will always remain the most generally useful, as it is by far the most delicate instrument for the detection of the presence of blood, as it usually occurs in stains. Moreover, it may prove the only method applicable to extremely minute stains.

COMPARATIVE MORPHOLOGY OF RED CELLS.

The red cells of all healthy mammals are circular, homogeneous, non-nucleated, biconcave, disk-shaped bodies, with the

exception of the camel, dromedary, llama, and alpaca, whose cells are oval, while those in the Mexican deer are circular, heart-shaped, and crescentic. In the freshly smeared blood of healthy new-born infants, a few nucleated red cells may usually be found, and in various diseases of the adult nucleated red cells may be rather numerous.

Dresbach[1] has published a remarkable case of a mulatto the majority of whose blood cells were distinctly oval or elliptical

FIG. 29.—Elliptical Red Cells in a Healthy Human Subject. × 1,000. Dresbach's case.

in shape. The accompanying figure shows the appearance of the blood spread which Dr. Dresbach kindly allowed me to have photographed. The subject appeared to be healthy and was not suffering from any symptoms of anæmia. The elliptical shape of the cells was observed in the fresh condition and over a period of two months.

[1] Dresbach, Science, 1904, vol. xix., 479; 1905, vol. xxi., p. 473.

The red cells of birds, fishes, and reptiles (*ovipara*) are oval and nucleated, except in the lamprey and some fishes (*cyclostomata*) whose cells are circular. In the fresh condition red cells are very elastic, folding, indenting, and greatly elongating without rupture, but when roughly manipulated they may split up into fragments each of which tends to assume a biconcave discoidal shape. These properties are in accordance with the view that the red cell is composed of an elastic stroma with condensed outer border and holding hæmoglobin in compact form, not by means of a hollow membrane, but by virtue of a chemical union between the hæmoglobin and the stroma (Rollett[1]).

Red cells exhibit a strong tendency to cohere to one another by their flat surfaces, forming long rows (rouleaux), and when these rouleaux are compressed in drying, the shape and size of the red cells may be greatly altered.

The Osmotic Relations of the red cells are very delicately balanced. Human red cells begin to absorb water and swell up into spheroidal bodies and discharge hæmoglobin in solutions containing less than .46 per cent NaCl, while they contract and crenate in solutions containing more than .9 per cent of NaCl. These limits vary with each animal species, and in each individual some red cells are more resistant and some less resistant than the average. After brief drying, red cells are promptly dissolved by normal salt solutions. When red cells have absorbed water and become spheroidal their diameter lessens, to a degree estimated experimentally by Formad[2] at one-third the original dimension.

When red cells are exposed to certain hæmolytic agents such as snake poison, hæmolytic serum, and various laking chemicals they become very cohesive, are drawn out into elongated forms, fused together in homogeneous masses, some of them are increased in diameter on drying, and some may be subdivided so that their original size and form are greatly obscured. This process is called agglutination and hæmolysis. Alterations of this type are not infrequently encountered in the study of red cells restored from blood-clots, especially when these clots are large and have dried slowly, or where partially dried clots have suffered from the access of moisture or laking fluids.

[1] Rollett, Hermann's "Handbuch d. Physiol.," 1880, Bd. iv., Abt. i.

[2] Formad, Journal of Comp. Medicine and Surgery, 1888, p. 254.

Hence in estimating the size of red cells only those portions of the clot should be selected that have dried rapidly.

If moist blood is heated to 50° or 56° C. the red cells are gradually split up into fragments and destroyed. In dry blood-stains also the red cells may be destroyed by exposure to sunlight for

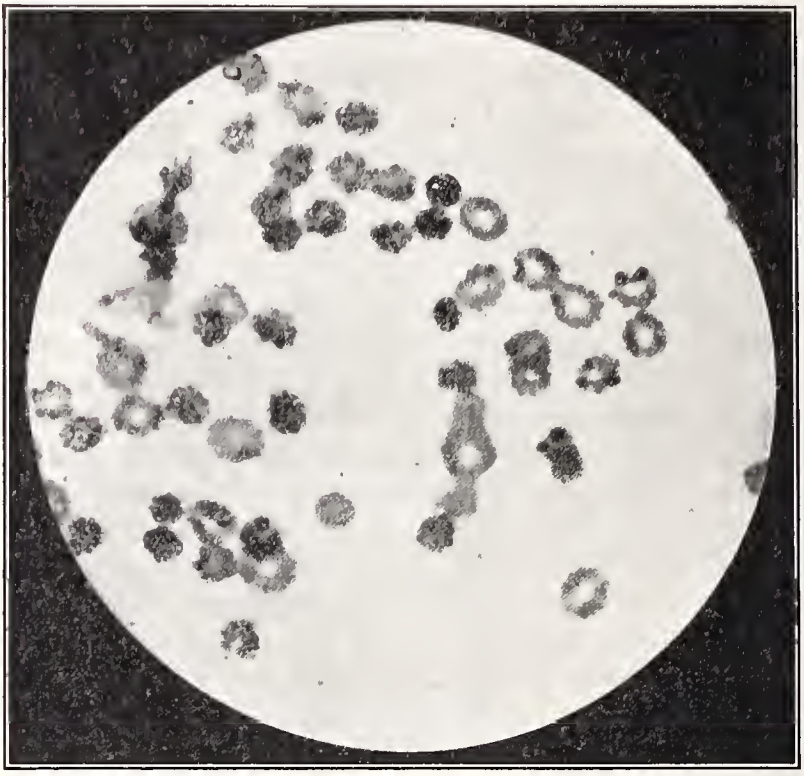


FIG. 30.—Human Red Cells Treated with Agglutinating Serum.

five days, but if dried in a thin layer on glass they are not affected by direct sunlight in three weeks (Hammerl[1]).

STAINING PROPERTIES.

The staining properties of red cells are among the most reliable indications of their identity. The living red cell has a yellowish refractive lustre, and is achromatic. When fixed by heat or drying, it retains its yellowish color and develops a strongly acidophile staining tendency which resides in the hæmoglobin.

[1] Hammerl, Vierteljahrschr. f. gerichtl. Med., 1892, Bd. iv., p. 44–61.

In large clots, or when exposed to decomposition, the tendency to stain bright red with eosin may be lost, and the whole cell or its central portion may become basophile and stain readily with basic dyes as hæmatoxylon and methylene blue. Overheated cells stain faintly with acid dyes or only by basic dyes. Cells subjected to traumatism before drying may extrude a central nuclear substance in the form of "blood plates" which may sometimes be demonstrated by basic dyes within the cell where they may be mistaken for nuclei.

SIZE.

The determination of the size of the red cells has long been one of the most essential as well as difficult problems in the medico-legal examination of blood-stains, since the size of these cells once furnished the only means of distinguishing human blood from that of other mammals. Since the discovery of the biological or serum test for blood the exhaustive study of the size of red cells restored from stains has been reduced to a secondary position. Yet this topic can never lose its importance, since it will always furnish valuable corroborative evidence of the origin of red cells, and it may still be found the only method applicable to extremely minute stains.

The diameter of the red cell varies throughout the animal kingdom from that of the musk-deer, $\frac{1}{12,325}$ of an inch, to that of *Amphiuma tridactylum*, a Louisiana reptile, $\frac{1}{363}$ of an inch, which can be seen with the naked eye (Gulliver[1]).

Regarding the size of human red cells authorities differ but slightly, all agreeing that the average diameter lies between $\frac{1}{3,200}$ and $\frac{1}{3,300}$ inch. In each individual a few red cells vary considerably from the average diameter. Formad[2] states that 90 per cent of human corpuscles measure between $\frac{1}{3,100}$ and $\frac{1}{3300}$, the maximum being $\frac{1}{2,900}$ and the minimum $\frac{1}{3,800}$ inch.

Wormley,[3] in three series of 500 corpuscles each, found only three that measured more than $\frac{1}{2,857}$ inch and four less than $\frac{1}{3,846}$ inch, while 77 per cent of the first series, 72.2 per cent of the second, and 81.2 per cent of the third fell between $\frac{1}{3,077}$

[1] Gulliver, Proc. Zoological Soc., London, 1875, p. 474.

[2] Formad, Jour. of Compar. Med. and Surg., 1888, vol. ix., p. 254.

[3] Wormley, "Microchemistry of Poisons," Philadelphia, 1885.

and $\frac{1}{3,389}$ inch. It is therefore obvious that a large number of cells must be measured, and conclusions drawn only from their average size. This rule and also the variations in the size of red cells in individual animals are well illustrated in the following table prepared by White:

TABLE SHOWING VARIOUS SIZES OF RED BLOOD CORPUSCLES (MEASURED IN MICRONS) IN MAN AND DOMESTIC ANIMALS.

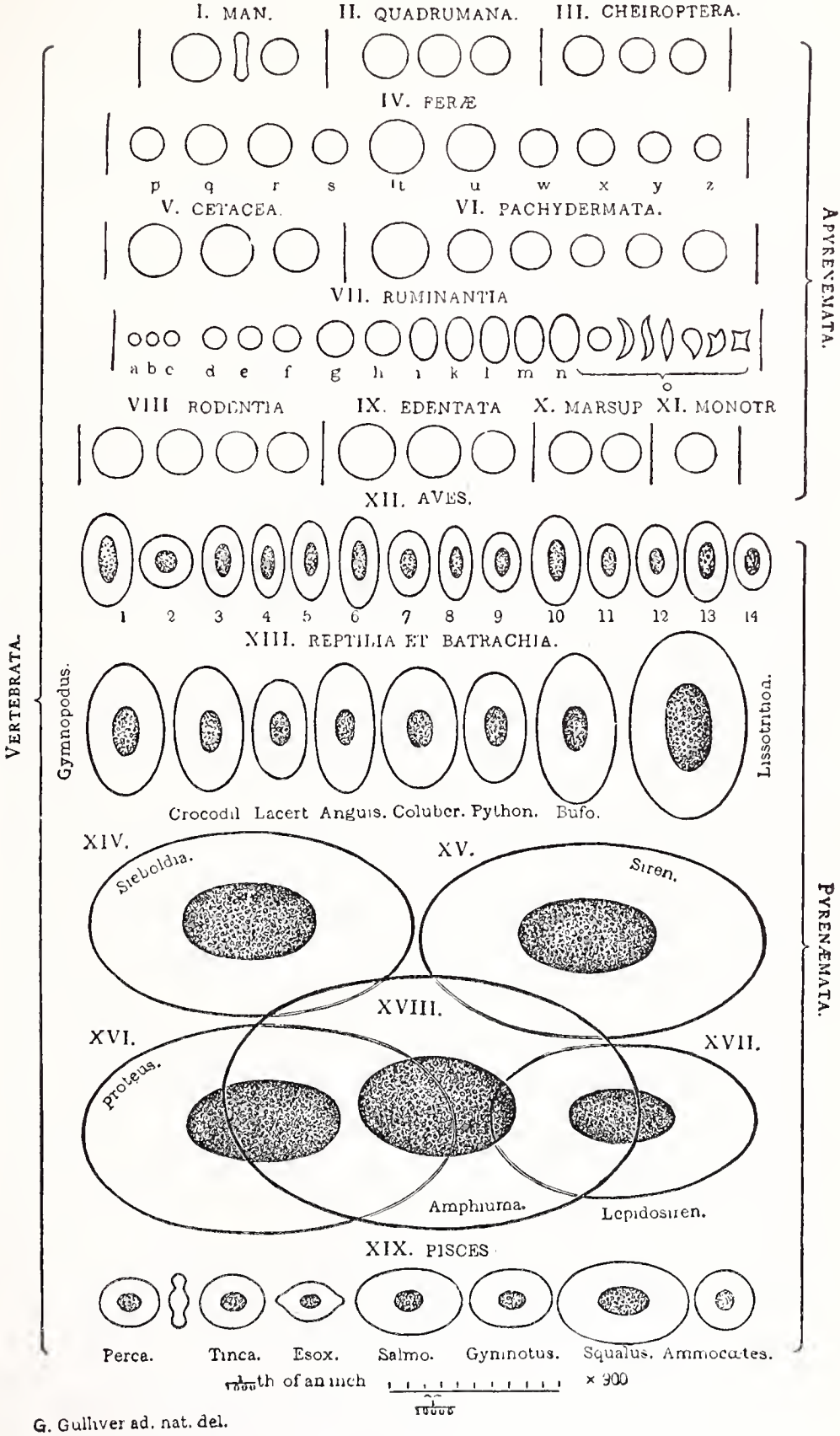
Microns.	Man.	Dog.	Pig.	Ox.	Sheep.	Goat.
9.50						
9.25	1					
9.00	5					
8.75	3					
8.50	15					
8.25	32	..	2			
8.00	28	..	1			
7.75	51	5	5			
7.50	48	14	4			
7.25	10	21	6			
7.00	2	45	10			
6.75	4	56	15	1	1	
6.50	0	26	13	1	0	
6.25	1	11	19	0	0	
6.00	..	16	44	29	0	
5.75	..	5	19	16	0	
5.50	..	1	13	20	3	
5.25	..	1	17	71	9	
5.00	..	..	10	34	30	
4.75	..	..	6	19	38	
4.50	..	..	4	8	71	
4.25	..	..	4	1	26	2
4.00	..	..	3	..	12	11
3.75	..	..	5	..	3	94
3.50	..	..	..	..	7	63
3.25	..	..	..	..	..	24
3.00	..	..	..	..	..	6
Number of corpuscles	200	200	200	200	200	200
Maximum	9.31	7.85	8.39	6.77	6.77	4.31
Minimum	6.39	5.46	3.85	4.46	3.85	3.16
Mean	8.01	6.87	6.07	5.44	4.75	3.69

Racial differences in the size of red cells are very slight. Richardson[1] measured 100 red cells from individuals of fourteen nationalities, finding insignificant variations. Daubler[2] finds that the red cells of the African negro and of the Zulus are uni-

[1] Richardson, Amer. Jour. of Med. Sciences, 1887, vol. lxxiii., p. 112.

[2] Daubler, Vierteljahrsschr. f. gerichtl. Med., 1899, Bd. xviii., p. 258.

Gulliver's micrometry of red blood corpuscles, all to a uniform scale.



G. Gulliver ad. nat. del.

formly larger than in the Caucasian race, averaging 9μ, while the average obtained from Germans was 8.12μ.

Among domestic animals those whose blood is most likely to be mistaken for human blood are the dog, beef, pig, horse, cat, sheep, and goat, while among the common wild animals sometimes domesticated are the monkey, opossum, guinea-pig, rabbit, rat, and mouse. The average diameter of the red cells among these animals varies from $\frac{1}{3,000}$ inch (dog) to $\frac{1}{6,000}$ inch (goat).

The following table, modified from Wood, presents the average measurements of red cells in various classes of animals.

Gulliver's table is an excellent graphic comparison of vertebrate red cells, which is reproduced together with the explanation of the plate taken from Formad's article upon "The Comparative Studies of Mammalian Blood."

Gulliver does not claim for his table absolute accuracy, but says that "the relative value of the measurements, though probably not unexceptionable, may be entitled to more confidence as fair approximation to the truth."

Explanation of the Figures upon Gulliver's Plate.—All the objects are red blood corpuscles drawn to one and the same scale, which is at the foot of the drawing. The whole length of the scale represents $\frac{1}{1,000}$ of an English inch, and each one of the ten divisions $\frac{1}{10,000}$ of an inch. Only corpuscles of the average sizes and quite regular shapes are given; and they are all magnified to the same, to wit, about 900 diameters. For details see description below.

A.—VERTEBRATA APYRENÆMATA (SEE PLATE).

I. HOMO (MAN) 1–3,200
   1. Corpuscles lying flat.
   2. The same on edge.
   3. Membranous base of same after removal by water of coloring matter; it shows diminution in diameter on account of acquired spherical shape.

II. QUADRUMANA (MONKEYS).
   4. Simia troglodytes (chimpanzee) 1–3,412
   5. Ateles ater (black-faced spider monkey) 1–3,602
   6. Lemur anguanensis..... 1–4,003

III. CHEIROPETERA (BATS).
   7. Cynoncteris collaris (fruit bat)..... 1–3,880
   8. Vespertilio noctula (large bat)..... 1–4,404
   9. Vespertilio pipistrellus (common bat)..... 1–4,324

Mammals.	Gulliver, 1845, 1875.	Wormley, 1885.	Treadwell.	Formad, 1888.	Richardson, 1869.	C. Schmidt, 1848.	French Medico-Legal Society, 1873.	Masson, 1885.	Dragendorff, 1881.	Woodward, 1875.	H. Schmidt, 1878.
Man	1–3200	1–3250	1–3200	1–3200	1–3224	1–3330	1–3386	1–3256	1–3300	1–3092	1–3412
Monkey	1–3412	1–3382			1–3395						
Opossum	1–3557	1–3145									
Guinea-pig	1–3538	1–3223	1–3397	1–3400				1–3300		1–3213	
Kangaroo	1–3440	1–3410									
Musk-rat	1–3550	1–3282	1–3487								
Dog	1–3532	1–3561	1–3672	1–3580	1–3542	1–3630	1–3479	1–3577	1–3628	1–3246	1–3846
Rabbit	1–3607	1–3653	1–3984	1–3662		1–3968	1–3681	1–3628	1–3968		
Rat	1–3754	1–3652	1–3908			1–3968					1–5000
Mouse	1–3814	1–3743	1–4223			1–4166					
Pig	1–4230	1–4268	1–4163	1–4250	1–4230	1–4098	1–4233	1–4098	1–4098		1–4098
Ox	1–4267	1–4219	1–4673	1–4200	1–4267	1–4385	1–4535	1–4233	1–4385		1–4695
Horse	1–4600	1–4243	1–4614	1–4310		1–4456	1–4535				
Cat	1–4404	1–4372	1–4648			1–4535	1–3907	1–4456	1–4535		
Elk	1–3938	1–4384									
Buffalo	1–4586	1–4351									
Wolf (prairie)	1–3600	1–3422		1–3450							
Bear (black)	1–3693	1–3656									
Hyena	1–3735	1–3644									
Squirrel (red)	1–4000	1–4140	1–3847								
Raccoon	1–3950	1–4084									
Elephant	1–2745	1–2738									
Leopard	1–4319	1–4390									
Hippopotamus	1–3429	1–3560									
Rhinoceros	1–3765	1–3649									
Tapir	1–4000	1–4175									
Lion	1–4322	1–4143									
Ocelot	1–4220	1–3885									
Mule		1–3760	1–4432								
Ass	1–4000	1–3620	1–4036								
Ground squirrel		1–4200	1–3762								
Bat	1–4175	1–3966									
Sheep	1–5300	1–4912	1–5353	1–5000	1–5300	1–5649	1–5080		1–5649		1–6060
Goat	1–6366	1–6189	1–7982	1–6100		1–6369	1–5525				
Woodchuck	1–3484		1–3489								
Red fox			1–3918								

AVERAGE SIZE OF THE RED CORPUSCLES.—*Continued.*

Mammals.	Gulliver.	Wormley.
Whale	1–3099	
Ibex		1–6445
Sloth	1–2865	
Platypus (duck-billed)	1–3000	
Capybara	1–3190	1–3164
Seal	1–3281	
Musk-deer	1–12325	
Beaver	1–3325	
Porcupine	1–3369	
Llama, long diam.	1–3361	1–3201
Llama, short "	1–6299	1–6408
Camel, long "	1–3123	1–3331
Camel, short "	1–5876	1–5280
Birds.		
Chicken, long diam.	1–2102	1–2080
Chicken, short "	1–3436	1–3483
Turkey, long "	1–2045	1–1894
Turkey, short "	1–3598	1–3444
Duck, long "	1–1937	1–1955
Duck, short "	1–3424	1–3504
Pigeon, long "	1–1973	1–1892
Pigeon, short "	1–3643	1–3804
Goose, long "	1–1836	
Goose, short "	1–3839	
Quail, long "	1–2347	
Quail, short "	1–3470	
Dove, long "	1–2005	
Dove, short "	1–3369	
Sparrow, long "	1–2140	
Sparrow, short "	1–3500	
Owl, long "	1–1763	
Owl, short "	1–4076	

Reptiles.	Gulliver.	Wormley.
Tortoise (land), long diam.	1–1252	1–1250
Tortoise (land), short "	1–2216	1–2200
Turtle (green), long "	1–1231	
Turtle (green), short "	1–1882	
Boa-constrictor, long "	1–1440	1–1245
Boa-constrictor, short "	1–2400	1–2538
Viper, long "	1–1274	
Viper, short "	1–1800	
Lizard, long "	1–1555	
Lizard, short "	1–2743	
Batrachians.		
Frog, long diam.	1–1108	1–1089
Frog, short "	1–1821	1–1801
Toad, long "	1–1043	
Toad, short "	1–2000	
Triton, long "	1–848	
Triton, short "	1–1280	
Proteus, long "	1–400	
Proteus, short "	1–727	
Amphiuma tridactylum, long "	1–363	1–358
Amphiuma tridactylum, short "	1–615	1–622
Fishes.		
Trout, long diam.	1–1524	
Trout, short "	1–2460	
Perch, long "	1–2099	
Perch, short "	1–2824	
Pike, long "	1–2000	
Pike, short "	1–3555	
Eel, long "	1–1745	
Eel, short "	1–2842	
Lamprey (circular)	1–2134	
" (diam. of nucleus)	1–6400	

IV. Feræ (Beasts of Prey).

(p)	10. Sorex tetragonurus (shrew)	1–4,571
(q)	11. Ursus labiatus (lipped bear)	1–3,728
(r)	12. Bassaris astuta (civet cat)	1–4,033
(s)	13. Cercoleptus caudivolvulus (kinkajou)	1–4,573
(t)	14. Trichechus rosmarus (walrus)	1–2,769
(u)	15. Canis dingo (dog, Australian)	1–3,395
(w)	16. Mustella zorilla (weasel)	1–4,270
(a)	16. Felis leo (lion)	1–4,322
(b)	16. Felis leopardus (leopard)	1–4,319
(x)	17. Felis tigris (tiger)	1–4,206
(y)	18. Paradoxurus pallasii (Pallas paradoxure)	1–5,485
(z)	19. Paradoxurus bondar (Bondar paradoxure)	1–5,693
(a)	19. Hyena striata (striped hyena)	1–3,735

V. Cetacea (Whales).

	20. Balæna (boops—whale)	1–3,099
	21. Delphinus globiceps (ca'ing-whale)	1–3,200
	22. Delphinus phocæna (porpoise)	1–3,829

VI. Pachydermata.

	23. Elephas indicus (elephant)	1–2,745
	24. Rhinoceros indicus (rhinoceros)	1–3,765
	25. Tapirus indicus (tapir)	1–4,000
	26. Equus caballus (horse)	1–4,600
	27. Dicotyles torquatus (peccary)	1–4,490
	28. Hyxar capensis (Cape hyrax)	1–3,308

VII. Ruminantia (Ruminants).

(a)	29. Tragulus javanicus (Javan chevrotain, musk-deer)		1–12,325
(b)	30. Tragulus meminna (Indian chevrotain)		1–12,325
(c)	31. Tragulus Stanleyanus (Stanleyan chevrotain)		1–10,825
(d)	32. Cervus nemorivagus (deer)		1–7,060
(e)	33. Capra Caucasica (Caucasian ibex)		1–7,045
(f)	34. Capra hircus (domestic goat)		1–6,366
(g)	35. Bos urus (represented by Chillingham cattle)		1–4,267
(h)	36. Camelopardalis giraffa (giraffe)		1–4,571
(i)	37. Auchenia vicugna (vicuna)	L. D.	1–3,555
		Sh. D.	1–6,587
(k)	38. Auchenia paca (alpaca)	L. D.	1–3,361
		Sh. D.	1–6,229
(l)	39. Auchenia glama (llama)	L. D.	1–3,361
		Sh. D.	1–6,229
(m)	40. Camelus dromedarius (single-hump camel)	L. D.	1–3,254
		Sh. D.	1–6,931
(n)	41. Camelus Bactrianus (double-hump camel)	L. D.	1–3,123
		Sh. D.	1–5,876
(o)	42. Cervus Mexicanus[1] (deer—Mexican)		1–5,175

[1] The only animal in which the red blood corpuscles present a variety of shapes in the same individual.—Gulliver.

VIII. Rodentia (Rodents).		
43. Hydrochœrus capybara (capybara)		1–3,190
44. Castor fiber (beaver)		1–3,325
45. Sciurus cinereus (squirrel)		1–4,000
46. Mus messorius (harvest mouse)		1–4,268
IX. Edentata.		
47. Myrmecophaba jubata (ant-eater)		1–2,769
48. Bradypus didactylus (sloth)		1–2,865
49. Dasypus villa (armadillo)		1–3,315
X. Marsupialia.		
50. Phascolomys (wombat)		1–3,456
51. Hypsiprymnus setosus (kangaroo rat)		1–4,000
XI. Monotremata.		
52. Echidna histrix (echidna)		1–3,840

B.—VERTEBRATA PYRENÆMATA.

	L.D.	Sh.D.
XII. Aves (Birds).		
1. Struthio camelus (ostrich)	1–1,649	1–3,000
2. The same made round and deprived of color by water.		
3. Vanga destructor (East India shrike)	1–2,019	1–3,892
4. Lanius excubitor (great gray shrike)	1–1,989	1–5,325
5. Bubo virginianus (horned owl)	1–1,837	1–4,000
6. Syrnea nyctea (snowy owl)	1–1,555	1–4,042
7. Columba rufina (rufous pigeon)	1–2,314	1–3,329
8. Columba migratoria (wild pigeon)	1–1,909	1–4,626
9. Dolichonyx oryzivorus (rice bird)	1–2,400	1–4,167
10. Buceros rhinoceros (rhinoceros hornbill)	1–1,690	1–3,230
11. Psittacus augustus (August amazon)	1–2,085	1–3,606
12. Phasianus superbus (barrel-tailed pheasant)	1–2,128	1–3,587
13. Pelecanus onocrotalus (white pelican)	1–1,777	1–3,369
14. Trochilus sp. (humming bird)	1–2,560	1–4,000

Figs. XII., XIV., XVI., XVII., and XVIII. represent red blood corpuscles of Reptilia and Batrachia; while under Fig. XIX., those of the fishes are given.

LEUCOCYTES.

The leucocytes of vertebrates are very characteristic blood cells, and if their minute structure could be demonstrated from blood-stains the information thus acquired might serve to distinguish the origin of the blood. It is frequently possible to identify in blood-stains leucocytes which are indistinguishable from human white cells, but the mononuclear basophile cells are nearly identical in appearance in many vertebrates, while the

neutrophile and eosinophile cells of man and lower animals are nearly alike in structure and can seldom be demonstrated with such distinctness of detail as to warrant any certain statement regarding their origin. A partial exception to the general rule is found in cases where blood is mingled with pus in which it is frequently possible to demonstrate a large number of polynuclear neutrophile leucocytes with such distinctness as to leave little doubt that the cells are of human origin. It would hardly be wise, however, to pass a positive opinion on such evidence.

MISCELLANEOUS MICROSCOPICAL OBJECTS IN BLOOD-STAINS.

Besides the presence of blood cells one should carefully note in the microscopical examination of stains the presence of all objects of whatever nature which are foreign to blood. It is often of great importance as indicating the origin and history of the stain to detect in it epithelial cells, fat cells, muscle fibres, fragments of bone, hairs, mucus, fecal detritus, vegetable cells or fibres, and threads of cotton, wool, or hemp, and even minute bits of wood or earth.

TECHNIC OF MICROSCOPICAL EXAMINATION.

FRESH BLOOD.

When dealing with fresh blood or blood contained in isotonic fluids it is only necessary to place a suitable drop of the fluid on a clean glass slide and cover it with a cover-glass. A more permanent preparation may be secured by sealing the cover-glass by cement or vaselin. The drop should be of small dimensions so that the cells are separated from the rouleaux and lie flat and isolated.

Fresh blood is more satisfactorily studied in dry-stained preparations. The glass slides should be thoroughly washed with soap and water and dried. Passing them through the free flame facilitates the even spreading of the cells. To spread the blood, the edge of one slide should be touched to the blood drop, then applied to the surface of a second slide, and after the blood has flowed to the edge of the slide it is slowly drawn over the surface of this receiving slide. The depth of the layer, which should be thin, may be controlled by the pressure. The specimen

should be then dried in the air, and afterward fixed in strong alcohol for 15 to 20 minutes, or by dry heat 120° C. for 10 minutes.

STAINING

may be accomplished by any of the methods employed in clinical work, of which eosin and methylene blue, and Ehrlich's triacid solution, are most frequently used.

Eosin and Methylene Blue.

Flood the slide for one minute with .1-per-cent watery solution of water-soluble eosin, wash in water, and flood again with 1-per-cent watery solution of Ehrlich's rectified methlyene blue. This method is superior to all others for most purposes, and may be recommended for medico-legal work, but it does not demonstrate the neutrophile granules of leucocytes.

Ehrlich's Triacid Solution.

This method requires that the specimen, *fixed by heat*, be flooded with the solution for one minute and then washed in water. Its sole advantage is the clear demonstration of neutrophile granules in leucocytes.

In dry-stained preparations some distortion of many cells commonly occurs, but such artificial changes are recognizable under the microscope. There is a distinct uniform increase in the diameter of those cells which are very thinly spread, and if possible only such cells should be selected for measurement as show perfectly rounded forms and light staining centres.

DRY BLOOD.

It is usually a very difficult undertaking satisfactorily to restore red cells from a dry clot, which fact accounts for the great variety of expedients suggested for the purpose. One should select from the spot a portion which gives evidence of most rapid drying, usually from the edge, and by means of a clean knife blade transfer some of the powdered or scaly substance to a clean glass slide. To this should be added one or two drops of some fluid which will isolate the coherent cells and tend to restore

their original form, and the specimen covered with a cover-glass.

The following chief menstrua[1] have been recommended:

Virchow's Fluid: Caustic potash, 30 to 33 per cent in water.

Puppe's Fluid: Equal parts of caustic potash, 32 per cent, and formalin.

Roussin's Fluid: Glycerin, 3 parts; sulphuric acid, 1 part; water enough to yield a fluid of s.g. 1028.

Ranvier's Iodized Fluid: Potassium iodide, 2 gms.; water, 100 gms.; iodine sufficient to saturate the solution.

Vibert's Fluid: Corrosive sublim., 5 gms.; common salt, 2 gms.; water, 100 gms.

Paccini's Fluid: Corrosive sublimate, 1 gm.; common salt, 2 gms.; glycerin, 100 gms.; water, 300 gms.

Muller's Fluid: Bichromate of potash, 2 parts; sulphate of sodium, 1 part; water, 100 parts.

Polain's Fluid: Equal parts of solution of gum arabic, sulphate of sodium, and common salt, each solution of s.g. 1020.

Richardson employed a .75-per-cent solution of common salt.

Welcker used a solution of glycerin in water, 1 part to 7, or a mixture of common salt, 4 parts; egg albumen, 300 parts; water, 2,700 parts.

Wood frequently employed with very satisfactory results a solution of acetate of potash, s.g. 1030.

Wormley recommended distilled water in quantities not to exceed the original quantity in the blood mass; or a solution of glycerin, s.g. 1030, which does not evaporate as readily as water. With very old stains he recommended the addition of a little caustic potash to the water or dilute glycerin.

It will be seen that these fluids are strongly alkaline, neutral, or acid in reaction; some are of high gravity and some of low; some evaporate readily and some do not. Most of them are active laking agents for recently dried red cells, but prolonged drying renders red cells very resistant even to the action of distilled water.

The object to be secured is the isolation of coherent red cells without their destruction, and it has been found that the strongly alkaline fluids accomplish this result more rapidly than the

[1] For a full list of these formulas, see Formad, Jour. of Comp. Med. and Surg., 1888, vol. ix., p. 289.

others and do not lake dry red cells. Since the process requires considerable time, there is an advantage in adding glycerin to the alkali to prevent evaporation, but glycerin extracts water from red cells. As a routine fluid the writer prefers Virchow's fluid with formalin (Puppe) or the strong solution of acetate of potash, s.g. 1030, recommended by Wood, evaporation being prevented by sealing the specimen with vaselin. The older the stain the longer is the time required for the isolation of the red cells.

Fresh stains may yield isolated cells immediately, but older stains require maceration for some hours or even days, and the process may then be facilitated by placing the sealed specimens in the thermostat at 37° C. The strong alkaline solutions are apt to dissolve the red cells when prolonged maceration is required, and in dealing with very old stains common salt solution is probably the best fluid to use. Old blood and tissue cells are often dissociated satisfactorily by comminution in .6-per-cent salt solution and placing the specimen under a sealed cover-glass in the thermostat, when the growth of bacteria seems to be the essential influence in separating the cells.

Richter finds that the cells of old blood-stains are best isolated by a mixture of pepsin and glycerin (Grübler's pepsin-glycerin) which digests the fibrin network. The swelling produced by this method Daubler counteracts by successive additions of 1-per-cent formalin to the specimen.

The process of maceration should be followed under the microscope from time to time, and when a number of isolated cells are found they should be measured at once. When it is desired to identify other cells and detritus with which the blood may be mixed the cover-glass may be slipped off and the specimen dried and stained in the usual way.

A failure to obtain satisfactory specimens of restored red cells is usually referable to changes which have taken place in the red cells during or after drying, and which have resulted in the destruction or extreme distortion of the cells. Blood which has fallen on a non-absorbent surface, as glass, wood, leather, or paper, and has escaped the subsequent action of moisture, will usually give an abundance of red cells suitable for measurement. Stains on dry iron surfaces also commonly contain well-preserved red cells, but progressive rusting often destroys the cells and

alters the hæmoglobin. Cells from stains on cloth are usually much distorted and difficult of restoration unless the blood is obtained from a portion of clot which has not penetrated the cloth and become intimately adherent to the fibres. When blood penetrates cotton or linen cloth in small amounts, microscopical examination usually shows that the red cells are very closely adherent to the smallest fibres, which are coated by a layer of homogeneous red-cell detritus or badly distorted red cells which cannot be restored. Greasy or starched cloths, wool, felt, and hair do not absorb blood so readily, and stains on such material may be expected to yield some perfect red cells.

Appearance of Cells in Washed Stains.

The prolonged access of moisture causes dried red cells to fuse together to some extent and prevents their satisfactory restoration. Further access of water, as in washing, may completely remove all traces of formed cells and leave a very little red-cell detritus on cloth fibres to which the blood was adherent, and yielding in the gross the characteristic diffuse reddish or brownish discoloration of washed stains. Thorough washing, however, is required to remove all traces of red cells, especially if these have had time to dry thoroughly before the washing. Sea water is much less effective than fresh in removing blood-stains, and hot soapy water much more effective.

Objects Simulating Red Cells.

There are many bodies in nature which closely resemble red blood cells and which in some notable recorded instances have led expert microscopists into erroneous conclusions regarding the presence of blood cells in stains. Animal tissues, and their detritus especially, contain a host of particles which cannot positively be distinguished from red cells and their fragments even by the most experienced pathologists who are constantly encountering them. The biconcave discoidal form must be required as an essential character of mammalian cells by one who would avoid error in this field, and as these features are not always retained by red cells one must ignore many imperfectly restored cells in the identification of blood from dry stains.

Vegetable spores, especially those of an alga *Porphyridium*

cruentum which measure $\frac{1}{2,900}$ to $\frac{1}{3,700}$ inch in diameter and the spores of *Achorion Schonleinii*, have been mistaken for red cells, but are not disk-shaped; they resist the action of strong acids, and they do not stain like red cells. Vegetable spores may develop in some of the macerating fluids employed, and are commonly found in blood-stains mixed with earth or contaminated with moulds. These and many other similar bodies encountered in the examination of miscellaneous stains are fully described in works on microscopy (Carpenter's).

METHOD OF MEASURING RESTORED RED CELLS.

The accurate measurement of red cells requires the use of a screw micrometer eye-piece and a stage micrometer. The micrometer eye-piece contains a circular glass plate ruled with fine lines which is fastened upon a movable brass plate and inserted through a slit in the eye-piece between the two lenses. The lateral movements of the brass plate are controlled by an accurately graduated screw. The value of the ruled spaces on the micrometer depends on the objective used and the tube length to which the eye-piece is adjusted. A $\frac{1}{12}$ immersion lens is commonly employed, and a Ramsden eye-piece of about $\frac{3}{4}$ inch focal length, magnification 12 diameters, is combined in the micrometer eye-piece furnished by Zeiss. To determine the value of the ruled spaces a stage micrometer is used, which is a glass plate ruled with fine lines, $\frac{1}{1,000}$ inch apart, and moved by a screw.

When viewed through a micrometer eye-piece, the lines of the stage micrometer include several lines of the eye-piece micrometer.

If five of the lines of the eye-piece micrometer are included in one division of the stage micrometer each division of the eye-piece micrometer measures $\frac{1}{5,000}$ inch. If one division of the stage micrometer does not cover any full number of spaces on the eye-piece micrometer, the tube length may be increased until such a result is reached. As a rule it is desirable to adjust the instrument so that ten or twenty divisions of the micrometer eye-piece are exactly included in a single division ($\frac{1}{1000}$ inch) of the stage micrometer, when it becomes possible accurately to measure in units of $\frac{1}{10,000}$ or $\frac{1}{20,000}$ inch, or even less. If now a red cell is brought into the field its size can be read off by bringing

one edge of the cell in juxtaposition with one line of the eye-piece micrometer and counting the number of divisions covered by the diameter of the cell. If this number proves to be 6 with a micrometry of $\frac{1}{20,000}$ the dimensions of the cell is $\frac{6}{20,000}$ or $\frac{1}{3,333}$ inch. The accuracy of this work depends on the reliability of the micrometer and the definition furnished by the lens. As it has not been found possible to construct micrometer scales with perfect accuracy, a new instrument must be carefully tested to determine if the $\frac{1}{1,000}$-inch dimensions are of equal value, and a new micrometer should be compared with an old one which is known to be accurate.

Some observers have endeavored to secure greater accuracy in measurements by using very high power lenses. Richardson secured a magnification of 3,700 diameters with a $\frac{1}{50}$-inch immersion objective. There is, however, a progressive loss of definition with lenses of very high power, and it is generally doubted if that source of error is more than balanced by the high magnification, so that most authorities prefer a $\frac{1}{12}$ immersion lens.

High-power photography has been found valuable by many observers in permitting the measurement of red cells under more stable conditions than can usually be obtained by direct examination under the microscope.

Photographs of animal red cells magnified 2,500 or 5,000 diameters are permanent exhibits, showing very striking differences in size, but it is doubtful if measurements of these photographs by an expert in micro-photography are as reliable as measurements of red cells by an equally expert microscopist.

CONCLUSIONS WARRANTED BY MICROSCOPICAL EXAMINATION OF BLOOD CELLS.

It is obvious that the microscopical examination will in the great majority of instances warrant a positive opinion that a stain does or does not contain blood, and will determine whether the blood is from a mammal or from an oviparous animal. The further claim that careful average measurements of restored red cells may in favorable cases warrant a positive opinion that the cells are human has not been indorsed by the majority of conservative authorities. A review of the opinions expressed by

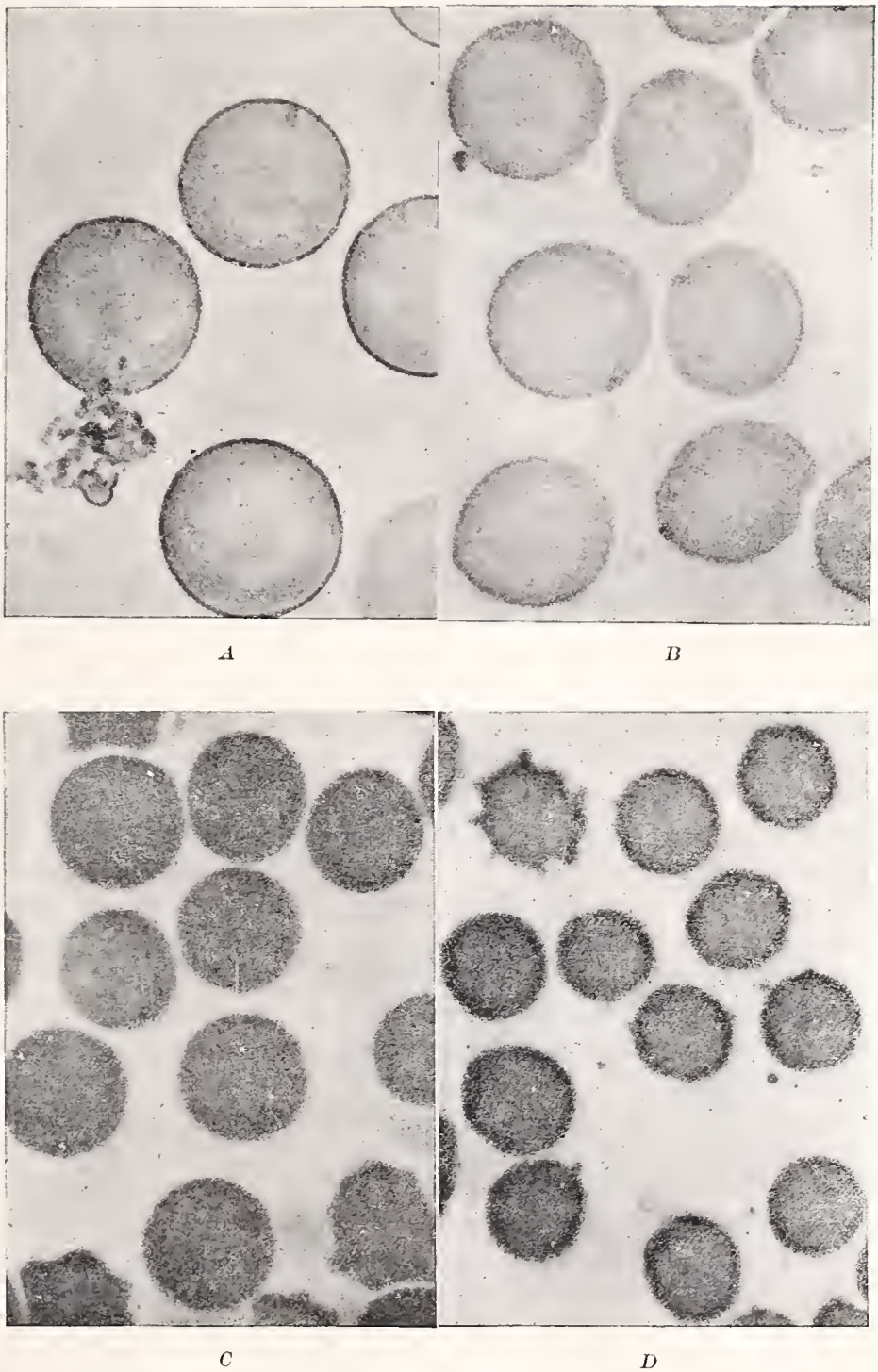


FIG. 31.—Photographs of Blood Cells. × 2,500. After Wood. *A*, Human; *B*, dog; *C*, ox; *D*, sheep.

competent authorities reveals three forms in which it is claimed opinions from measurements of red cells may be given.

Masson,[1] of the French army, and Reyburn,[2] of the American Microscopical Society, claimed that under favorable conditions human blood cells can be distinguished from those of any domestic animal, except the rabbit and guinea-pig.

Masson states: "Our experience has demonstrated that with reference to human blood the diagnosis from the blood of the pig, ox, and cat is easy, from that of the dog is difficult, from that of the rabbit uncertain, and from that of the guinea-pig impossible. As a matter of fact, in examining preparations of dried blood of unknown origin we have always obtained such figures that we have been able to decide with certainty (between human and dog cells)."

Reyburn states: "If the average diameter of the blood corpuscles in any specimen of blood containing at least 100 or, better, 500 corpuscles is less than $\frac{1}{4,000}$ inch it cannot possibly be human blood.

"If the blood corpuscles have an average diameter of from $\frac{1}{3,200}$ to $\frac{1}{3,300}$ inch then it is human blood, excluding the blood of the beaver, guinea-pig, kangaroo, monkey, musk-rat, porcupine, seal, and wolf. None of these are domestic animals, and stains produced by their blood can scarcely ever be met with under such circumstances as to be confounded with stains of human blood. Blood corpuscles from the dog, rabbit, ox, pig, horse, sheep, and goat can, by the use of high magnifying power and the careful counting of 100 to 500 corpuscles, be differentiated from human corpuscles, both in recently shed blood and in dry blood-stains."

Most experienced workers are slightly more reserved in their conclusions. Wormley,[3] Formad,[4] Wood,[5] Reese,[6] and others state that human blood can be positively distinguished from that of some domesticated animals, but not from that of several others. The domestic animals whose cells are less than $\frac{1}{4,000}$ inch are the beef, horse, sheep, goat, pig, and cat, while those the diameter

[1] Masson, Annal. d'Hygiène Publ., 1885, xiii, 385.

[2] Reyburn, The Medico-Legal Journal, 1892, p. 167.

[3] Wormley "Microchemistry of Poisons," 1885, p. 736.

[4] Formad, Jour. of Comp. Med. and Surg., 1888, p. 284.

[5] Wood, This Work, 1st ed., vol. ii., p. 68.

[6] Reese, Taylor, "Med. Juris.," 8th Amer. ed.

of whose cells is more than $\frac{1}{4,000}$ inch are the dog, rabbit, guinea-pig, monkey, and certain rodents. If the average diameter of the cells in the stain is distinctly greater than $\frac{1}{4,000}$ inch, the above observers claim that the blood cannot be from one of the domestic animals whose cells measure less than $\frac{1}{4,000}$ inch, and, other features being consistent, must be human blood or that of the dog, rabbit, guinea-pig, monkey, or some rodent.

More explicitly, if the diameters prove to fall between $\frac{1}{3,300}$ and $\frac{1}{3,100}$ inch (Wood) or more than $\frac{1}{3,300}$ (Formad), the evidence in favor of human blood is as certain as such evidence can be; the blood must be human or from one of the above-named animals, but the expert is justified in claiming only that the characters of the blood are consistent with an origin from man, and in no case can he positively affirm that a given specimen is human blood.

Richardson,[1] who first employed very high power lenses in the identification of blood cells, concluded that this method enables us, under favorable conditions, positively to distinguish stains produced by human blood from those caused by the blood of the pig, beef, red deer, cat, horse, sheep, and goat, but not those from animals whose cells are less than $\frac{1}{4,000}$ inch in diameter.

Finally, another group of observers practically claim that micrometry is of comparatively little value in the positive determination of the origin of blood cells, and that its results only justify the claim that the specimen is mammalian or non-mammalian.

They point out the sources of technical error in micrometry, the difficulty of fully restoring dried cells, and especially the variations in the size of red cells in different individuals of the same animal species.

Ewell[2] ruled a glass slide with 15 lines spaced $\frac{1}{250}$ to $\frac{1}{125}$ inch apart and had them measured by five competent microscopists who took the average of 5 measurements of each space, using standard micrometers of the same maker. The measurements of the same space varied from 0 to $\frac{1}{9,090}$ inch, which is a greater difference than that between the average diameters of red cells in man and most domestic animals.

Wormley, however, found that the measurements of the

[1] Richardson, Monthly Microscopical Jour., London, vol. xiii., p. 215.

[2] Ewell, The Medicolegal Journal, 1892, p. 175.

$\frac{1}{1,000}$-inch divisions of a stage micrometer by three observers did not vary beyond $\frac{1}{2000,000}$ inch, and of 7 human red blood cells, by two observers, not more than $\frac{1}{350,000}$ inch. These and the general results of various observers who have measured the cells of the same animals do not support the contention that the average technical error in micrometry of red cells is a serious matter.

The difficulty of restoring dried red cells with certainty to their original diameters is a more important consideration.

That the changes referable to drying and subsequent restoration are not sufficient seriously to alter the diameter of the cells is indicated by the following tables of results obtained by Wormley and by Formad:

TABLE OF PROFESSOR THEO. G. WORMLEY'S MEASUREMENTS.

EXAMINATION OF OLD BLOOD STAINS.

Animal.	Age of Stain.	Remarks.	Average.	Fresh Blood.
(1) Human.....	2 months old.	Stain, unknown.....	1-3358th inch.	1-3250th inch.
(2) "	2½ " "	Stain.....	1-3236th "	" "
(3) "	3 " "	Stain.....	1-3384th "	" "
(4) "	19 " "	Clot.	1-3290th "	" "
(5) Elephant.....	13 " "	Clot.....	1-2849th "	1-2738th "
(6) Dog.....	4 " "	Trace of stain, unknown.	1-3626th "	1-3561st "
(7) Rabbit.....	18 " "	Clot.....	1-3683d "	1-3653d "
(8) Ox	16 " "	Stain.....	1-4544th "	1-4219th "
(9) "	32 " "	Stain, unknown.	1-4495th "	" "
(10) "	4½ years "	Clot.....	1-4535th "	" "
(11) Buffalo	18 months "	Clot.....	1-4312th "	1-4351st "
(12) Goat.....	17 " "	Stain.....	1-5897th "	1-6189th "
(13) Ibex.....	18 " "	Clot.	1-6578th "	1-6445th "

" In the case of the human blood, No. 1, two months old, the deposit was in the form of a thin stain on muslin, and its nature, other than that it was mammalian blood, was unknown at the time of examination. The corpuseles were readily found, and two series of thirty corpuseles each were measured. In the human blood two and a half months old, fifty corpuseles, ranging from $\frac{1}{3,125}$ to $\frac{1}{3,448}$ of an inch, were measured.

" The blood-stain of the dog, No. 6, was prepared by Dr. Frankenberg, and consisted of a single stain so minute as to be barely visible to the naked eye; its nature at the time of the examination was unknown. In this instance only fifteen corpuseles were measured.

" In the ox blood four and a half years old, the corpuseles were rather readily obtained, and two closely concordant series of measurements were made.

TABLE OF PROFESSOR H. F. FORMAD'S MEASUREMENTS.

COLLECTIVE RESULTS OF SOME OF THE SERIES OF MEASUREMENTS OF RED BLOOD CORPUSCLES IN BLOOD STAINS AND IN EXPERIMENTALLY DRIED BLOOD.

Normally shaped (bi-concave, disk-like) corpuscles only being measured.

Source of Blood.	Upon what Substance.	Age of Stain.	Condition, or how Prepared.	Number of Individuals Examined.	Number of Preparations Made.	Reagents used for Remoistening.	Time of Effect of Reagents.	Per Cent of Measurable Corpuscles in each Preparation.	Total Number of Corpuscles measured.	Average Diameter in inch.	Normal Diameter of Fresh Blood.
Man	Knife and glass	2 days.	Rapidly dried	10	30	[1]K.O.H.	5 to 30 min.	20 to 50	1000	1-3260	1-3200
Man	Cloth	7 days.	Slowly dried	2	10	K.O.H.	½ hour to 2 days	5 to 20	250	1-3300	1-3200
Man	Wood and linen.	10 days.	Slowly dried	4	20	[2]M.F.	2 hrs. to 2 days.	5 to 15	200	1-3300	1-3200
Man	Paper	14 days.	Decomposed from moisture	1	10	M.F.	3 days.	not measurable.			
Man	Knife	2 years.	Well dry preserved	1	10	K.O.H. & M.F.	2 days.	10 to 50	400	1-3240	1-3200
Man	Stone	6 years.	Well preserved	1	30	K.O.H. & M.F.	3 days.	5 to 20	500	1-3320	1-3200
Guinea-pig	Glass	7 days.	Rapidly dried stains	6	18	K.O.H. & M.F.	1 to 2 days.	10 to 40	500	1-3460	1-3400
Wolf	Glass	7 days.	Rapidly dried stains	1	50	K.O.H. & M.F.	1 to 2 days.	5 to 20	1,000	1-3450	1-3450
Dog	Cloth	7 days.	Rapidly dried stains	4	12	K.O.H. & M.F.	1 to 2 days.	5 to 50	500	1-3650	1-3580
Rabbit	Knife	7 days.	Rapidly dried stains	10	30	K.O.H. & M.F.	1 to 2 days.	5 to 50	1,000	1-3700	1-3662
Ox	Cloth	7 days.	Rapidly dried stains	10	30	K.O.H. & M.F.	1 to 2 days.	20 to 40	1,000	1-4240	1-4200
Sheep	Glass	7 days.	Rapidly dried stains	3	9	K.O.H. & M.F.	1 to 2 days.	50	500	1-5060	1-5000
Goat	Knife	7 days.	Rapidly dried stains	3	9	K.O.H. & M.F.	1 to 2 days.	50	500	1-6200	1-6100

[1] "K.O. H." stands for 33 per cent solution of caustic potash. [2] "M.F." stands for Müller's fluid.

"In examinations of this kind it should be borne in mind that certain portions of a deposit may fail to yield satisfactory results, while from other portions the corpuscles may be readily obtained."

Daubler[1] found that the red cells of man, dog, rabbit, and guinea-pig diminish in diameter on drying .288μ, and Kayserling found an average loss in diameter of dried cells of .34μ. The cells of the above animals dried 5 to 12 days and treated for 2 to 4 hours with 32 per cent KOH were found to swell considerably beyond their original diameters, each type of blood furnishing average diameters of many cells (30) over 10μ, *viz.*, human blood (30 cells) 10.6μ, rabbit blood 10 to 10.5μ, and dog blood 10.3μ. Cells restored with water were less swollen, the average of human cells being 9.5μ, while the original average size was 8.12μ. The swelling with caustic potash was diminished one-half by adding equal parts of formalin to the fluid (Puppe's fluid). These somewhat contradictory results of Daubler's indicate that the conclusions drawn from the measurements of carefully prepared cells on glass slides are not to be transferred without great caution to cells restored from blood-stains, and especially that conclusions should be drawn only from the measurements of large numbers of cells.

Woodward[2] and Ewell[3] have shown that the average diameter of considerable numbers of carefully prepared red cells may vary between $\frac{1}{2,9\,1\,5}$ and $\frac{1}{3,4\,6\,0}$ inch for man, and between $\frac{1}{2,9\,4\,1}$ and $\frac{1}{3,6\,1\,0}$ for the dog, and Babcock[4] finds that if we accept the highest average of any observer, the list of animals the size of whose cells is very close to that of man's is as follows:

Elephant	1/2745 Gulliver
Sloth	1/2865 Gulliver
Whale	1/3099 Gulliver
Opossum	1/3145 Wormley
Capybara	1/3146 Woodward
Dog	1/3246 Woodward
Seal	1/3281 Gulliver
Muskrat	1/3281 Wormley
Beaver	1/3325 Gulliver
Porcupine	1/3369 Gulliver
Monkey	1/3382 Wormley
Kangaroo	1/3410 Wormley
Wolf	1/3432 Wormley
Woodchuck	1/3484 Gulliver
Hare	1/3560 Gulliver
Rabbit	1/3607 Gulliver
Ass	1/3620 Wormley
Rat	1/3652 Wormley
Bear	1/3656 Wormley
Mouse	1/3743 Wormley
Mule	1/3760 Wormley
Bat	1/3880 Gulliver
Cat	1/3922 Weleker
Raccoon	1/3950 Wormley
Squirrel	1/4000 Gulliver

[1] Daubler, Vierteljahressehr. f. ger. Med., 1899, Bd. xviii., p. 258.

[2] Woodward, Amer. Jour. Med. Sei., 1875, vol. lxix., p. 151.

[3] Ewell, North American Practitioner, 1890, pp. 97–151.

[4] Babcock, "Hamilton's System of Legal Med.," 1900, vol. i., p. 177.

Nevertheless, this list may be considerably reduced, as the majority of observers do not attempt to claim a probable human origin for any blood-stain the average diameters of whose cells are more than $\frac{1}{3,100}$ inch or less than $\frac{1}{3,300}$.

There remain for consideration some other sources of error. It is a well-known fact that the cells of new-born animals are larger and show greater variations than those of the adult. Hence, the cells of a new-born guinea-pig, rabbit, or puppy dog approach the human red cell more closely than do those of the adult animal. Woodward has shown that by picking out groups of large cells among those of the puppy he could secure averages of considerable numbers quite within the limits of human red cells, but not if the cells were taken without discrimination (*cf.* White[1]). This same source of error doubtless exists in the case of the young monkey, guinea-pig, rabbit, opossum, etc.

The relatively greater diameter of the red cells of the human infant would tend to lessen the danger of confusing them with the cells of domestic animals. Treadwell's[2] examination of the blood of three infants at birth showed greater variations in the size of the red cells (10.1–4.2μ) than in adults (9.3–5.7μ), but the averages of 200, or even of 50 cells, were no greater than those of the adult. Ewell obtained an average from 200 cells of a male infant 36 hours old of 8.86μ, variations between 11.39 and 5.7μ, or in groups of 100 cells, averages between 9.06 and 8.65μ.

In pernicious anæmia the human red cells are often of considerably increased diameter, and in chlorosis and many forms of secondary anæmia they may be moderately diminished in size. Yet while these changes might lead one to mistake human blood for the smaller cells of domestic animals, the occurrence of similar alterations in the blood of domestic animals must be excessively rare. Other possible disturbing factors are the diminished size of red cells in all animals in high altitudes, the effects upon the restoration of red cells of variations in temperature, moisture, and barometric pressure of the atmosphere, and in the age, specific gravity of the plasma, and state of the peripheral circulation of the animal.

[1] White, "Reference Handbook of Medical Sciences," 2d ed., vol. ii., p. 87.

[2] Treadwell, see White, *l.c.*, p. 84.

At present there is no evidence to show that any of these influences, if present, can seriously affect the conclusions.

From the foregoing discussion it is obvious that micrometry of red cells, while incapable of positively identifying restored human blood cells from those of some other animals (monkey, opossum, rabbit, guinea-pig), may still render evidence fully justifying the claim that the characters of a given specimen are consistent with a human origin. In order to obtain these results the specimen must yield a considerable number of well-restored cells, so that at least 50, or, better, 100, can be satisfactorily measured. Their average diameters, if human, should fall between $\frac{1}{3,300}$ and $\frac{1}{3,100}$ inch. In many cases where the history of the stain is uncertain and the restoration of the cells less satisfactory, one should not attempt to claim more than a mammalian origin for the blood.

MENSTRUAL BLOOD.

The gross and microscopical characters of menstrual blood vary greatly according to the profuseness of the flow, at various portions of the menstrual period, and with the presence or absence of catarrhal conditions of the genito-urinary passages. Hence it is often important to secure the menstrual history of the subject supposed to be connected with the stain.

The location of menstrual stains is often suggestive of their origin, while the gross appearance usually indicates a mixture of blood and viscous material, or partly dissolved blood. Menstrual stains are apt to be repeated at each menstrual period, and signs of imperfectly washed stains may be found in the vicinity of the one under examination.

The blood from a profuse menstrual hemorrhage may not vary in any demonstrable respect from that flowing from an incised wound. Usually menstrual blood contains mucus, an excess of leucocytes, stratified squamous epithelium from the vagina, occasionally columnar cells from the uterus, and vaginal bacteria. When mixed with mucous secretion or epithelial detritus, it clots less rapidly than pure blood. Being often mixed with watery fluids, the red cells are usually less perfectly preserved, and are less numerous in proportion to the albumen than in most blood-stains (Dragendorff[1]).

[1] Dragendorff, Maschka, "Gerichtl. Med.," 1881, Bd. i., p. 483.

The presence of mucus may be detected in the gross specimen or in the process of softening the clot, or in microscopical specimens stained by eosin and methylene blue.

The leucocytes are usually clumped in masses and entangled by mucus, indicating their presence in excess over those found in the blood, and their origin from a mucous membrane. A great excess of polynuclear cells indicates a catarrhal condition of the passages. The squamous epithelial cells from the vagina may be distinguished from those of the skin by the presence of nuclei stainable by methylene blue. Unless these cells are found in considerable numbers and intimately mixed with the blood, there can be no certainty that they have not come from the anus, or from the vagina or bladder and been subsequently mixed with blood cells from another source, since underclothing that touches the skin or muco-cutaneous junctions commonly contains many exfoliated epithelial cells. Vaginal bacteria are usually present in large numbers in the blood and adherent to leucocytes and epithelial cells. They are usually cocci, and in cases of specific vaginitis typical gonococci may be demonstrated by Gram's stain.

In the late stages of menstruation the admixture of leucocytes, epithelial cells, and mucus is increased, yielding stains that are more readily identified.

Lochial stains are very similar to those from menstrual blood. Leucocytes, epithelial cells, and masses of fibrin are sometimes more abundant in the lochia, while shreds of decidual or placental tissue are discharged for several days after confinement and may be detected as specific indications of pregnancy.

It is to be doubted whether the evidence obtainable from the examination of a menstrual blood-stain is ever sufficient to warrant a positive statement regarding the particular origin of the blood. The precipitin test, however, may demonstrate that the blood is human.

BLOOD-STAINS OF NASAL, BUCCAL, PULMONARY, AND GASTRO-INTESTINAL ORIGIN.

Abundant hemorrhage from the nose or lungs may leave stains which have no distinctive features. Their location, however, may give some indication of their origin. Blood from such sources is usually mixed with an abundance of mucus,

which tends to give the stain a peculiar compact, irregular appearance, with epithelial cells from the mouth or respiratory passages, and with leucocytes and bacteria. Small nasal bleedings forcibly expelled usually contain much mucus, many leucocytes, and columnar or ciliated epithelium; blood expelled from the mouth may contain flat nucleated epithelia with excessive numbers of bacteria; pigmented cells are characteristic of pulmonary expectoration which may also contain tubercle bacilli; blood from the stomach may be mixed with food, and from the bowel with fecal elements.

THE GUAIACUM TEST.

The chief value of this test is as a preliminary step in the examination of a series of articles submitted as possible blood-stains. If the guaiac test is negative, the stain is probably not blood; but very old blood may not react satisfactorily.

In 1863 Van Deen[1] discovered that minute traces of blood pigment, even when very old, yield a blue color when treated with tincture of guaiac and old oil of turpentine containing unstable oxygen. Later peroxide of hydrogen was substituted as a cleaner and more accessible oxidizing agent than turpentine.

Recently it has been shown that the property of blood to dissociate hydrogen peroxide and turn tincture of guaiac blue is referable to the presence in the red cells of a ferment, oxydase, shared to some extent by all animal tissues, but not dependent on the blood content of these tissues, residing in the stroma of the red cells (Schönbein[2]) and probably in combination with an iron albumen (Jacoby[3]). The blue color is referable to an oxidation of guaiaconic acid (Schaer[4]). The blood ferment is often called *peroxidase* as it acts only in the presence of oxygen in unstable form.

According to Lieberman[5] fresh blood solution containing oxyhæmoglobin oxidizes guaiaconic acid and turns it blue very slowly, but if the blood solution is mixed with turpentine, which changes oxyhæmoglobin to methæmoglobin, the mixture oxidizes

[1] Van Deen, cit. from Liman, Vierteljahrsschr. f. ger. Med., 1863, Bd. xxiv., p. 193.

[2] Schönbein, cit. from Jacoby.

[3] Jacoby, Ergebnisse d. Physiologie, 1902, Jahr. I., Bd. i., Th. I., p. 230.

[4] Schaer, cit. from Jacoby.

[5] Lieberman, Pflüger's Archiv, 1904, Bd. 104, p. 227.

guaiaconic acid rapidly, *i.e.*, it gives a good guaiac test. When guaiac solution is freed from oxgyen, inactivated by heating, he finds that it fails to give the blue reaction with solutions of methæmoglobin. Hence methæmoglobin does not directly oxidize the guaiac, but merely transfers the oxygen furnished by the turpentine, or contained in the guaiac, to the guaiaconic acid. Oil of turpentine makes the necessary transformation of oxyhæmoglobin to methæmoglobin and furnishes oxygen also to unite with the guaiaconic acid, while the methæmoglobin acts as a ferment. Colloidal solutions of platinum exert a similar influence on tincture of guaiac.

The delicacy of the test with fresh blood is very great, Liman[1] demonstrating a reaction in a 1:6,000 solution of blood, and Wormley[2] with 1:5,000 solution. The age of the specimen has important influence on the result of the test. Taylor[3] obtained a successful reaction from blood-stains on a towel twenty-four years old; but the test has often failed with much more recent stains.

Babcock[4] finds that stains more than three years old often fail to react satisfactorily, and he failed to obtain any reaction from a stain on cloth and one on buckskin after thirteen years. Wormley states that very old stains yield the reaction, and even when they have been washed. As a rule, the older the stain the slower is the blue color in appearing, and the loss of the guaiac reaction is often associated with marked insolubility of the blood pigment and failure of the hæmin test. The fact that a ferment is the essential agent in the reaction may explain many of the failures, and while there appears to have been no systematic attempt to determine by experiment the conditions under which blood-stains fail to react, these conditions are probably those which destroy peroxidases. Hammerl[5] always obtained the guaiac reaction from blood heated one hour to 100° C., but never after exposure for an hour to 135° C.

The reliability of the test as an indication of the presence of blood cannot be regarded as very great. Taylor made a large

[1] Liman, Vierteljahrsschr. f. ger. Med., 1893, Bd. xxiv., p. 193.

[2] Wormley, "Microchemistry of Poisons," 1885, p. 710.

[3] Taylor, Guy's Hospital Reports, 1867, vol. xiii., p. 431.

[4] Babcock, Hamilton's "System of Legal Med.," 1900, vol. i., p. 160.

[5] Hammerl, Vierteljahrsschr. f. ger. Med., 1892, Bd. iv., p. 4.

number of experiments with colored vegetable substances, and concluded that no red coloring matter, animal or vegetable, except the red of blood, produces the blue coloration of guaiacum in the presence of peroxide of hydrogen. Nevertheless, the peroxidases are present in all animal tissues, and the danger of confusion of this ferment with the oxidases which turn guaiac blue *without the presence of peroxide of hydrogen* has never been submitted to thorough study from the medico-legal standpoint.

Among these oxidizing substances may be mentioned especially the ferric salt in iron rust, and indigo, the presence of which renders the test inapplicable to the examination of blood on rusty knives and cloths treated with indigo blue.

A delayed reaction from the oxidase of dried vegetable matter may be readily mistaken for the more specific reaction from blood. Animal secretions and excreta as well as animal tissues yield the peroxidase reaction. The oxidase reaction is given by all oxidizing metallic compounds, and by most vegetable tissues. A positive reaction by the guaiac test, therefore, indicates the probable presence of blood or other animal tissue or detritus. Negative results indicate the probable absence of these substances except when the material is very old or has been subjected to some influence, as heat, which destroys ferments.

METHOD OF PERFORMING THE TEST.

The suspected stain should be soaked in water, and if very old, should be macerated. If the stain is bulky, a small fragment may be separated and tested, otherwise the test may be performed on the cloth or other material containing the stain.

Into a small flat porcelain dish are placed a few drops of freshly prepared tincture of guaiac and a few drops of water, producing a milky emulsion. The watery solution of the stain may suffice to produce the emulsion. If a blue color develops at once without the addition of peroxide, the test is valueless. If the solution remains colorless a few drops of peroxide of hydrogen are added, when the blue color developing promptly in the solution or about the edges of the stain indicates the presence of peroxidase of blood.

Precautions.

The tincture of guaiac must be freshly prepared by dissolving 1 or 2 gms. of the resin in 10 c.c. of alcohol. It should have the color of pale sherry wine.

The emulsion of guaiac must be applied to the stain before the peroxide is added. A blue color appearing after the addition of the guaiac alone shows the presence of oxidases of animal, vegetable, or mineral origin.

After the addition of peroxide the blue color must appear promptly, since a few hours' exposure to the air will suffice to turn guaiac blue which has been dried upon cloth or paper.

A control test should be performed on an unstained portion of the material containing the suspected blood, as it not infrequently happens that this material itself turns guaiac blue.

An excellent method of applying the guaiac test when blood is mixed with some bulk of fæces or other material is commonly employed in clinical laboratories, and has been extensively tested by my colleague, Dr. T. W. Hastings.

Shake up the material with ether to remove fats and decant the ether. To the residue add 2–3 c.c. glacial acetic acid, and shake. Add several cubic centimetres of ether, shake, and decant the ethereal extract containing acid hæmatin. To a few cubic centimetres of this ethereal extract add 5–10 drops of freshly prepared solution of gum guaiac in 95 per cent alcohol. Pour carefully down the side of the tube 1–2 c.c. of *old turpentine*. The presence of blood is indicated by the appearance, at the level of contact of the turpentine, of a blue ring which later diffuses through the upper layers of the fluid.

The guaiac may be replaced and controlled by a fresh solution of powdered *aloin* in 70 per cent alcohol, which gives a red ring in five minutes, diffusing through the upper layers. Or H_2O_2 may be used instead of guaiac or aloin, provided it is fresh and active.

This test is extremely delicate, but a positive reaction is given by the fæces of subjects on a meat diet.

THE HÆMIN TEST.

This, the chief chemical test for blood pigment, depends on the formation of characteristic crystals of a halogen salt of hæmatin.

HÆMIN CRYSTALS.

These crystals, known as Teichmann's crystals, cannot readily be mistaken for any other object in nature occurring under the same conditions. They are brownish rhombic prisms varying in size, form, arrangement, and depth of color, according to the rapidity with which they form and the concentration of the blood pigment. Quite different forms are often found in the same specimen. Their formation is influenced by the solubility of the blood pigment, by the heat employed, by the proportion of salt present, and by the presence of albuminous and colloidal substances in the mixtures. Nevertheless, under all conditions when present they can be positively identified by their form and color. Crystals of murexide, purpurate of ammonia, are very similar in form to hæmin crystals, but are bright red in color and change to violet on treatment with caustic potash, which dissolves hæmin. Vibert believes that the danger of mistaking crystals formed from indigo for Teichmann's crystals is serious, and reports that from the washings of a piece of flannel deeply blued with indigo, crystals have been obtained having almost exactly the form and reddish color of hæmin. Most observers do not regard this danger as real, and in any such case a cloth deeply stained by indigo may be tested before applying the hæmin test to blood upon it.

The usual type is an elongated prism with pointed ends, single, crossed, or radiating from a central point, and deep reddish-brown in color. Or they are larger, broader, with more irregular borders, rounded ends, and lighter yellowish-brown in color. When forming very slowly they may be larger, quite broad, elliptical, with pointed ends, and light brown in color.

All of the halogen salts of hæmatin, chloride, bromide, iodide, produce Teichmann's crystals of typical form. When hydriodic acid is used, Stryzowski[1] states that the crystals are larger than usual. In general, hæmin crystals vary in length from $\frac{1}{6,000}$ inch

[1] Stryzowski, Therapeut. Monatshefte, 1902, xvi., p. 459.

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

HÆMIN CRYSTALS.

EXPLANATION OF PLATE VIII.

CRYSTALS OF HÆMATIN CHLORIDE (HÆMIN). × 400.

FIG. 1.—Crystals readily forming while warm from small amounts of blood.

FIG. 2.—Crystals formed from strong concentration of blood.

FIG. 3.—Crystals slowly formed from moderate concentration of blood.

FIG. 4.—Crystals formed over night from weak solution of blood.

to $\frac{1}{1200}$ inch. They are insoluble in water, ether, or alcohol, slightly soluble in ammonia, dilute sulphuric and nitric acids, readily soluble in caustic potash and strong sulphuric acid. In polarized light they show pleochroism (Rollett[1]), and in a dimly lighted field exhibit a star-like refraction of light (Jaumes[2]).

Very minute quantities of blood, if compact and not disseminated in performing the test, will suffice to yield the crystals. In very old stains in which the pigment is comparatively insoluble it is more difficult to obtain crystals, and special expedients may be necessary. Yet Clement[3] records a successful hœmin test with blood-stains on paper sixty years old.

Blood-stains on *rusty knives* are often found very insoluble owing to oxidation by ferric salts, and yield hæmin crystals with difficulty. Among other influences rendering difficult a successful hæmin test are prolonged exposure to sunlight, decomposition, heating between 100° and 140° C., and mixture with fats. With decomposing blood very variable results have been reported, some observers failing to obtain crystals from blood decomposed for a few months only, while others succeeded with specimens that had decomposed for two to four years (*cf.* Wacholz[4]).

Hammerl[5] found that blood heated for one hour to 140°–145° C. could not be made to yield crystals, and Wood[6] was unsuccessful with blood smears on glass heated to 120° C., and with blood soaked several hours in naphtha, or treated with bromo-chloralum or strong solution of aluminum chloride. Tamassia[7] found that contact with iron rust begins to affect the formation of hæmin crystals within twenty to thirty days, after which irregular crystals or crystalline or amorphous masses were usually obtained. Lewin and Rosenstein[8] obtained negative results from fresh blood mixed for varying periods with sublimate, ferric chloride, plumbic acetate, silver nitrate, potassium chlorate, sulphuric and nitric acids, and animal charcoal. Wacholz,[4] however, was suc-

[1] Rollett, Hermann's "Handbuch d. Physiol.," 1880, Bd. iv., Abt. i.

[2] Jaumes, cit. by Kolisko, "Hoffmann's Lehrbuch d. ger. Med.," 1903, p. 441.

[3] Clément, "Conférences Pratiques de Médecine Légale," Paris, 1880, cit. from Babcock.

[4] Wacholz, Vierteljahrsschr. f. ger. Med., 1901, Bd xxi., p. 227.

[5] Hammerl, Vierteljahrsschr. f. ger. Med., 1892, Bd. iv., p. 4.

[6] Wood, This work, 1st ed., vol. ii., p. 17.

[7] Tamassia, Rivista sperimentale, 1890, T. xvi., p. 155.

[8] Lewin, Rosenstein, Virchow's Archiv, Bd. cxlii., p. 134.

cessful with fresh blood treated seven days with all the above agents and others, but failed with a mixture of blood and hydrazin.

Richter[1] has shown that in the majority of cases failure of the hæmin test is referable to the formation of comparatively insoluble hæmatin, and not to further decomposition products of hæmoglobin, while Lewin and Rosenstein[2] concluded that complete failure of the hæmin test occurs only when hæmoglobin has been transformed into hæmatoporphyrin or hæmochromogen.

METHODS OF PERFORMING THE HÆMIN TEST.

The method to be employed in the hæmin test varies in some details according to the age and condition of the specimen. With dry blood of recent origin the simplest method suffices. A small portion of the clot or the material containing it is placed on a glass slide and moistened with a drop of .8-per-cent solution of NaCl or a dilute solution of iodide of potassium. It is then evaporated to dryness by gentle heat which is not sufficient to coagulate the albumens in the solution, covered with a small round cover-glass, and a drop of glacial acetic acid is run under the cover-glass. The specimen is then gently heated till bubbles of acid appear, at which temperature it is held until the acid is slowly and completely evaporated. By this procedure the blood pigment is dissolved by the acid and combined with the chlorine of the salt to form the hydrochloride (Hoppe-Seyler) or the anhydride (Nencki[3]) of hæmatin, which crystallizes on evaporation.

The dry specimen may be examined for crystals, or distilled water or dilute glycerin may be run under the cover-glass, and the glass sealed with cement.

Precautions.

(1) In evaporating the salt solution the heat must not be sufficient to cause coagulation of the albumens (140° F.) which interferes with the solvent action of the acid. Excessive heat may decompose the NaCl and drive off the necessary chlorine. An excess of salt is also to be avoided. Overheating at any

[1] Richter, Vierteljahrsschr. f. ger. Med., 1900, Bd. xx., p. 22.

[2] See note 8, p. 851.

[3] Nencki, Arch. f. exper. Path., 1886, Bd. xx., p. 325.

stage of the test causes sputtering and dissemination of the pigment. In dealing with very small specimens it is important to use a small cover-glass to limit the dimensions of the specimen.

(2) Some observers claim that crystallization of hæmin is facilitated by the use of acidified alcohol, instead of glacial acetic acid, while the use of alcohol doubtless tends to prevent the application of excessive heat. The alcohol then probably enters into the composition of the hæmin (Nencki). Wacholz recommends the use of 90 to 95 per cent alcohol acidified with 1 in 10,000 sulphuric, acetic, or lactic acid.

(3) Most failures to obtain hæmin crystals are referable to insolubility of the hæmatin, and in such cases Richter's expedient is of great value. He prevents the evaporation of the acid by using a hollow glass slide, and allows the specimen to stand over night, thereby permitting the gradual solution of the hæmatin. This method is very efficient with old and altered blood-stains, and may be successful with faint washed stains.

(4) When the blood is mixed with much water, urine, or earth, or in the form of faint washed stains, and cannot be secured in sufficiently compact form to be treated in the usual way, it may be concentrated by the sodium-tungstate method, as recommended by Wood.

The dry blood-stain should be soaked in dilute solution of iodide of potassium or solution of cyanide of potassium, and all the pigment removed by one of these active solvents aided by rubbing the specimen with a glass rod and finally wringing it out of the fluids. After filtration, to remove solid particles the dissolved pigment is strongly acidified by acetic acid and precipitated by the addition of a few drops of saturated solution of sodium tungstate, also strongly acidified by acetic acid. With considerable quantities of blood several cubic centimetres of tungstate solution are required, and a bulky precipitate forms which should be boiled until it collects in heavy flocculi and becomes chocolate-colored.

Minute quantities of pigment yield very slight precipitate which is best concentrated by standing twenty-four hours or until a brownish sediment collects, from which the fluid may be decanted. In either case the precipitate should be well washed with water, which is decanted off the larger specimens or absorbed by blotting paper from the minute ones. Finally, the washed

precipitate is transferred to a glass slide and tested in the usual way for hæmin crystals.

The spectroscopic test may also be applied to the precipitate slowly dissolved in dilute sodium hydrate, when the spectrum of alkaline hæmatin is obtained.

SPECTROSCOPIC EXAMINATION.

The very exact nature of the evidence furnished by the spectra of blood pigments, and the applicability of the method to extremely minute quantities of blood and to all the decomposition products of hæmoglobin, render the spectroscopic method extremely valuable in the medico-legal examination of blood.

The spectra of blood pigments vary distinctly with the chemical changes which the pigment may undergo.

Oxyhæmoglobin.

Fresh blood usually contains hæmoglobin in molecular combination with oxygen, *oxyhæmoglobin*, which contains, at room temperature and 15 mm. Hg. pressure, 27 c.c. of oxygen per gm., but on drying in air this is reduced to 4 c.c., without any change in the spectrum (Bohr[1]).

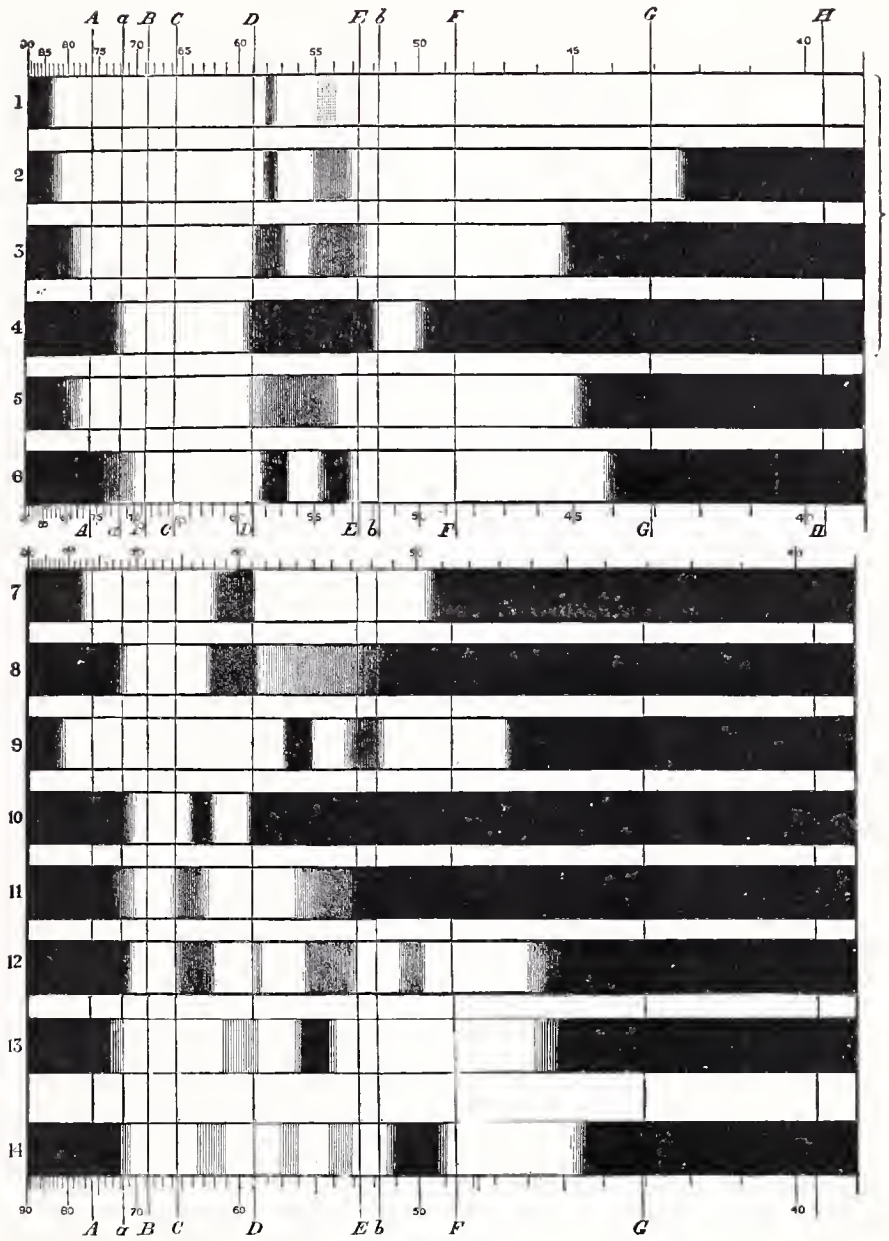
A dilute solution of oxyhæmoglobin shows two absorption bands between Fraunhofer's lines *D* and *E*.

The *a* band at *D* is narrower, deeper, and sharper, while the *b* band at *E* is broader, lighter, and more diffuse. These bands are still visible in a solution 1 cm. in thickness, containing .1 per cent of oxyhæmoglobin, but in weaker dilutions the *b* band at *E* begins to disappear. With increasing concentration both bands become broader and darker and both ends of the spectrum begin to show absorption, while with strong solutions the two bands become fused and all the light is absorbed except between the lines *a* and *D* of the violet and a small area to the right of *E*.

Hæmoglobin.

Oxyhæmoglobin readily loses its oxygen and darkens in color, and is then called *reduced hæmoglobin* or simply *hæmoglobin*. This change occurs when arterial becomes venous blood, and the oxy-

[1] Bohr, *cit.* by Hammarsten, "Physiol. Chemie," 1899, p. 141.



EXPLANATION OF PLATE IX

Spectra 1, 2, 3, and 4, Oxy-hæmoglobin of various degrees of concentration; Spectrum 5, Hæmoglobin; Spectrum 6, CO-Hæmoglobin; Spectra 7 and 8, Hæmatin in alkaline solution of different degrees of concentration; Spectrum 9, Hæmochromogen (Stokes' reduced hæmatin); Spectrum 10, Methæmoglobin; Spectrum 11, Acid hæmatin (blood treated with acetic acid); Spectrum 12, Acid hæmatin in ethereal solution; Spectrum 13, Acid hæmatoporphyrin; Spectrum 14, Alkaline hæmatoporphyrin.

gen may be artificially removed by a vacuum pump, by a current of indifferent gases, such as nitrogen or hydrogen, or by addition of reducing agents, such as ammonium sulphide or Stokes's reagent, or by putrefaction. Solutions of hæmoglobin readily absorb oxygen if exposed to the air or shaken, and the Hb becomes oxy-Hb. Hæmoglobin is readily soluble in water. When its solutions are heated to 70° C. or treated with acids or alkalies, the Hb is decomposed into an albuminous body and the iron-holding pigment hæmatin.

When dry, heating for one hour at 120° C., or for a longer period at 100° C., transforms most of the Hb into hæmatin, and the pigment requires several days to yield any solution in water, although still soluble in dilute acids and alkalies.

The spectrum of hæmoglobin shows a fusion of the two bands of oxyhæmoglobin into a single band, less sharply defined, which occupies the space between *D* and *E*.

The transformation of the spectrum of oxyhæmoglobin into that of reduced hæmoglobin by addition of ammonium sulphide or ammonia to the solution is commonly employed in the identification of blood pigment by the spectroscope.

Methæmoglobin is a compound of hæmoglobin with oxygen more firmly bound than in oxyhæmoglobin and not readily dissociable by weak reducing agents. The oxygen is, therefore, not in simple molecular, but in chemical union with the Hb. Methæmoglobin occurs in old bloody exudates, in the urine in hæmoglobinuria, and in blood and urine in poisoning by potassium chlorate and many coal-tar products, and after death from burns. It is artificially produced from fresh blood by the action of nascent oxygen, potassium permanganate, potassium ferricyanide, chlorates, nitrates, glycerin, pyrogallol, coal-tar products, and certain acids. It is found in old blood-stains exposed to sunlight and in long decomposed blood of acid reaction. Prolonged action of most of these reagents produces a further change into hæmatin (Menzies). Its acid and neutral solutions are brownish in color, but ammonium sulphide transforms it first into oxyhæmoglobin and finally into hæmoglobin, yielding a red color.

In neutral or slightly acid solutions methæmoglobin gives one absorption band between *C* and *D*, while both ends of the spectrum are absorbed. With dilute alkaline solutions two other

faint bands appear, sometimes fused between *D* and *E* in the same position as the bands of oxyhæmoglobin. With strongly alkaline solutions the band between *D* and *E* disappears while the others become more prominent.

Lankester,[1] Araki,[2] and Menzies[3] believe that pure methæmoglobin gives only two absorption bands, one at *C*, the other between *b* and *F*, and they refer the others to admixture with oxyhæmoglobin and hæmatin.

The various spectra of methæmoglobin may be demonstrated in solutions of fresh blood to which have been added a few drops of freshly prepared concentrated solution of potassium ferricyanide. The spectrum of methæmoglobin in weak acid solution resembles that of hæmatin in acid solution, but addition of ammonium sulphide has no effect on hæmatin while changing methæmoglobin to oxyhæmglobin or hæmoglobin.

Carbon-monoxide Hæmoglobin (CO–Hb).

This is an equimolecular combination of Hb and CO, but the CO forms with hæmoglobin a firmer union than does oxygen, and may displace the oxygen of hæmoglobin with the fatal effects seen in illuminating-gas poisoning. It has a bright cherry-red color which is very resistant to putrefaction, and may therefore long be retained in the cadaver, or more permanently preserved in the test-tube. Its spectrum is very similar to that of oxyhæmoglobin, but the two bands are slightly displaced toward the violet end of the spectrum, and they are not affected by reducing agents, which is a certain method of distinction from oxyhæmoglobin.

Hæmatin is a decomposition product of hæmoglobin, occurring rarely in blood extravasations, often in partly digested bloody stools, in the fæces after a rich meat diet, in urine after poisoning by arsenic, and in many old and comparatively insoluble blood-stains. When dry it is amorphous and dark brown, in alkaline solutions it is reddish if concentrated, greenish if dilute, and in acid solutions brown. It is insoluble in water, weak acids, or alcohol, but readily soluble in dilute alkalies, slowly in warm acidified alcohol, or cold glacial acetic acid. It

[1] Lankester, Quarter. Jour. Micr. Science, 1870, vol. x., p. 402.

[2] Araki, Zeit. f. physiol. Chem., 1890, Bd. xiv., p. 405.

[3] Menzies, Jour. of Physiol., 1895, vol. xvii., p. 402.

is therefore best dissolved for spectroscopic examination in dilute sodium or ammonium hydrate, when the spectrum of alkaline hæmatin is obtained; or in acidified alcohol with the spectrum of acid hæmatin.

Acid hæmatin absorbs both ends of the spectrum, especially the violet. The absorption bands demonstrable vary with the concentration and acidity of the solution. The most prominent is a sharp band between *C* and *D*. Between *D* and *F* there usually appears a broad diffuse band which, by varying the dilution, may be resolved into two bands, one dark and broad, between *B* and *F*, and another near *E*, faint and narrow. Sometimes a fourth faint narrow band may be detected just to the right of *D*. Usually one sees clearly only the line between *C* and *D*, and a broad dark area between *D* and *F*. In alkaline solution, which is preferably employed, there is a single band covering line *D* and extending nearly to *C*.

Hæmochromogen or Reduced Hæmatin.

Alkaline solutions of hæmatin treated with ammonium sulphide, Stokes's reagent, or hydrazin hydrate yield alkaline solutions of hæmochromogen; or when hæmoglobin is heated to 100° C. with excess of strong alkali, hæmochromogen is thrown down as a violet-gray amorphous precipitate which dissolves on cooling. As this substance gives a characteristic spectrum, its demonstration has proved of value in the examination of old and impure blood from which it is difficult to procure solutions of hæmatin. Its solutions readily absorb oxygen and become converted into hæmatin. The presence of weak acids in alcoholic solutions withdraws the Fe of hæmochromogen and converts it into hæmatoporphyrin. The spectrum presents two bands, one the darker midway between *D* and *E*, and another fainter which includes *E* and *b*.

Hæmatoporphyrin is an iron-free pigment obtained when hæmoglobin or hæmatin is heated with concentrated hydrochloric acid or dissolved in concentrated sulphuric acid. It occurs in traces in normal urine, and in larger quantity in the urine after sulphonal poisoning. Treated with warm fuming nitric acid, the solution is first reddish, then green, blue, and

finally yellow. Its composition probably varies in different solvents, with corresponding spectra.

In concentrated sulphuric or hydrochloric acid there appear two absorption bands, one narrow and faint, between *C* and *D*, and another, dark, broad, and sharply defined, midway between *D* and *E*. Dilute alkaline solutions yield four bands: one between *C* and *D;* a second, broad band covering *D;* a third at *E;* and a fourth broad band extending from *b* nearly to *F*. The bands at *D* and *E* recall those of oxyhæmoglobin.

TRANSFORMATIONS OF SPECTRA.

In the routine examination of blood it is always desirable to demonstrate the characteristic changes which blood pigments undergo and which render their identification absolutely certain.

(1) In dealing with fresh blood the spectrum of oxy-Hb is frequently obtained. This spectrum may be transformed into that of reduced Hb by addition of ammonium sulphide or Stokes's reagent.

Cochineal gives a red solution with alum, yielding a spectrum resembling that of oxy-Hb. On addition of ammonia the bands of cochineal become more intense and subsequent action of boric acid displaces these bands to the left or blue end of the spectrum, while this treatment has no effect on blood. Various other vegetable dyes yield spectra resembling that of oxy-Hb, but they are bleached by sulphite of sodium or potassium.

(2) Reduced Hb may be slowly changed to oxy-Hb by shaking the solution in the air, but this change will not occur in solutions containing excess of ammonium sulphide.

(3) If the original solution yields the spectrum of methæmoglobin this may be transformed into oxy-Hb or Hb by addition of ammonium sulphide.

(4) Hæmoglobin may be changed into hæmatin by addition of a crystal of citric acid. This is a more permanent change, and the subsequent addition of ammonia fails completely to restore the bands of Hb, but if one adds a crystal of sulphate of protoxide of iron and ammonia and a drop or two of fresh ammonium sulphide, shaking the solution protected from air, the Hb bands will slowly reappear.

(5) When alkaline solutions of hæmatin are obtained from

very old or altered stains, ammonium sulphide or Stokes's reagent transforms the spectrum into that of hæmochromogen.

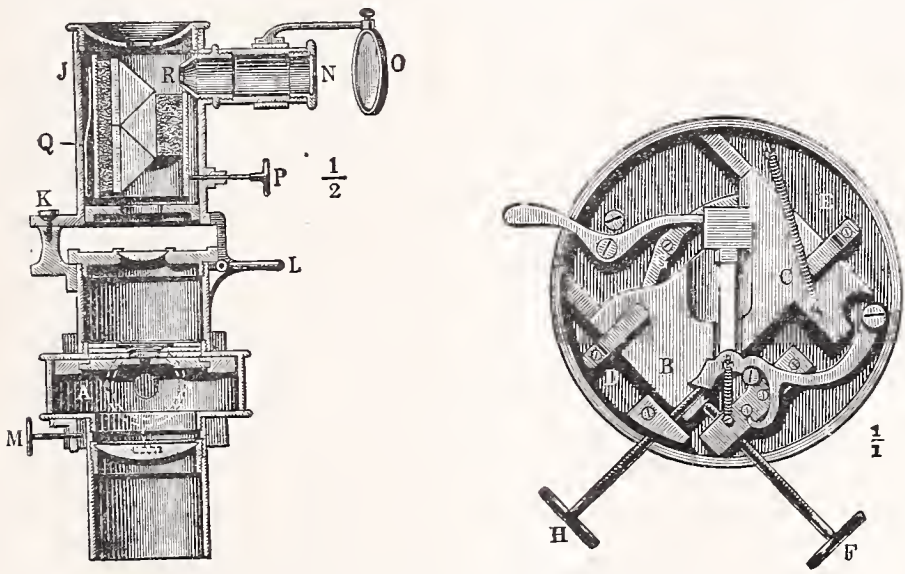
(6) When alcoholic solutions of hæmatin are obtained the addition of weak mineral acid stransforms the spectrum of hæmatin into that of the iron-free hæmatoporphyrin.

METHOD OF SPECTROSCOPIC EXAMINATION.

When the stain is large enough to furnish a considerable quantity of solution, an ordinary direct-vision spectroscope may be used. Hoffmann's or Vogel's pocket spectroscopes are satisfactory instruments, and they are provided with supports so as to permit the careful comparison of the spectrum of the fluid with that of a known solution of blood. Or a prism or mirror may be arranged to furnish a spectrum for comparison.

The Micro-spectroscope.

This instrument is required for the examination of small quantities of solution. It consists of a spectroscopic eye-piece



Figs. 32 and 33.—Abbé's Spectroscopic Eye-Piece.

which is inserted in the tube of the microscope, and of the two models employed there are advantages in either the Abbé or the Sorby-Browning.

The Abbé instrument consists of two main portions: the

drum *A* which fits into the tube of the microscope, and the spectroscope *J*. The *drum* contains an adjustable slit worked by the screws *H* and *F* which controls the length and breadth of the ray of light which comes to the eye from the object. By means of the screws the spectra are properly focussed. The drum also contains a prism illuminated by a side mirror, and moved into or out of the field by a projecting lever. With this mirror is a clamp to hold a small tube of solution which it may be desired to test or which may be used to give a comparison spectrum. The spectroscope *J* revolves on the pivot *K*, so that it can be brought into position over the eye-piece or moved away to permit focussing the object. At the side is a tube (*N*) which contains a scale, the divisions of which represent wave-lengths, expressed in one hundred thousandths of a millimetre. By means of the mirror *O* the scale is thrown upon the spectrum of the object, and it is focussed by the sliding tube *N*. It should be adjusted by the sliding screw *P* so that Fraunhofer's line *D*, the sodium line, coincides with the division line 58.9, the wave-length of the sodium line being 589 millionths of a millimetre.

PREPARATION OF SPECIMENS.

Considerable amounts of solution, 1 c.c. or less, may be examined by placing the fluid in a small tube or flat-sided cell and clamping before the aperture at the side of the drum. Very minute quantities of solution or minute fragments of blood must be examined on a glass slide from the stage of the microscope, in which case the drum prism furnishes a comparison spectrum. If the blood is comparatively recent, distilled water or salt solution may be used as a solvent.

Minute fragments of blood-stain require very careful handling. The material should be scraped by a knife upon a glass slide lying upon white paper, and carefully immersed and dissolved in a minute drop of water or salt solution. Hanging-drop slides with a shallow concavity may be employed, as they secure a desirable depth of very weak solutions. The specimen is then transferred to the stage of the microscope, and its point of deepest color focussed by a low-power ($\frac{1}{4}$-inch) lens. Sorby [1] claims that a good spectrum may be obtained from a blood-stain $\frac{1}{10}$ inch in diameter

[1] Sorby, Quarter. Jour. Science, 1865, ii., 205.

and weighing not more than $\frac{1}{1,000}$ grain, and that by careful manipulation a faint spectrum may be obtained from a single blood corpuscle.

From soap-suds from cloths containing blood-stains, hæmatin may be extracted by repeatedly shaking up with ether. The decanted ether may then be concentrated by evaporation. Blood in earth is usually extracted best by digestion with ammonia.

If the specimen is old and altered, the more active solvents of hæmatin must be used, as sodium hydrate or warm acidified alcohol. Old blood decomposed or dissociated by chemicals or high heat, or mixed with much foreign matter, sometimes requires the demonstration of hæmatoporphyrin, which may be accomplished either in acid or alkaline solutions. Kratter[1] recommends the acid solution, and prepares the specimen on a glass slide, adding a drop of concentrated sulphuric acid and crushing down the material to a suitable layer by pressure on the cover-glass.

Many such specimens, especially if containing much animal or vegetable material, are dark yellowish in color and do not yield satisfactory spectra. In such cases Ziemke[2] recommends the alkaline hæmatoporphyrin test and the following method: The pulverized material is treated for twenty-four hours with concentrated sulphuric acid, filtered slowly through asbestos or glass wool, the filtrate diluted with several volumes of distilled water, and the pigment precipitated by neutralization with ammonia. The brownish precipitate is thoroughly washed in distilled water, dried and dissolved in a mortar rubbing up with equal parts of absolute alcohol and strong ammonia. The solution, if too concentrated, must be diluted until the bands in the violet end of the spectrum become visible.

Grigorjew[3] has had successful results by the following method, by which the spectrum of hæmochromogen is secured: The material is macerated from twelve to twenty-four hours in: Caustic potash, 12; sodium potassium tartrate, 40; water, 100; and then for six hours in caustic potash, 15; sodium potassium tartrate, 10; water, 20. From this fluid it is transferred to a glass slide, the opaque particles removed, and the solution ex-

[1] Kratter, Vierteljahrsschr. f. ger. Med., 1892, Bd. iv., p. 62.

[2] Ziemke, *ibid.*, 1901, Bd. xxii., p. 231.

[3] Grigorjew, *ibid.*, 1902, Bd. xxiv., p. 82.

amined under a cover-glass for alkaline hæmochromogen. This procedure obviates the opaque yellowish color often encountered in acid solutions of hæmatoporphyrin.

Ipsen[1] successfully tested a large number of much altered or even charred blood-stains by the following method: To a flask containing the material he added absolute alcohol and roasted copper sulphate, and also one or two drops of strong sulphuric acid. After a few days at 37° C. the alcohol became tinged with blood pigment, and when placed in long tubes the spectrum of acid hæmatin was obtained. Later, he employed ten per cent potassium acetate in alcohol, digesting some days at 38°–40° C., and secured the spectrum of alkaline hæmatin.

THE PRECIPITIN SERUM TEST.

Although only a few years have elapsed since the first application of the bio-chemical method to the medico-legal study of blood, numerous extensive contributions appearing in rapid succession have so fully established the value of this test and so clearly defined its limitations, that the method has been universally endorsed for the medico-legal detection of the origin of blood. Although future investigations will doubtless extend our knowledge of technical details, they cannot invalidate the principles on which the method is based and cannot seriously alter the conditions under which its results may now be pronounced specific.

The original observations on which the precipitin test is based were those of Kraus, in 1897,[2] who obtained albuminous precipitates in certain bacterial cultures by the addition of homologous immune sera, and of Tschistovitsch, 1899,[3] who obtained a precipitate in eel serum by means of anti-eel serum from the rabbit. Very soon contributions by Bordet,[4] Uhlenhuth,[5] Wasserman and Schütze,[6] Stern,[7] Nuttall,[8] Grünbaum,[9] and many others demon-

[1] Ipsen, Vierteljahr. f. ger. Med., 1898, Bd. xv., p. 111; *ibid.*, 1900, Bd. xix., p. 1.

[2] Kraus, Wien. kl. Woch., 1897, p. 736.

[3] Tschistovitsch, Annales de l'Institut. Pasteur, 1899, p. 406.

[4] Bordet, *ibid.*, 1898, p. 886; 1899, p. 225.

[5] Uhlenhuth, Deutsche med. Woch., 1900, p. 734.

[6] Wasserman, Schütze, Berl. kl. Woch., 1901, p. 187.

[7] Stern, Deutsche med. Woch., 1901, p. 135.

[8] Nuttall, "Blood Immunity and Blood Relationship," Cambridge, 1904.

[9] Grünbaum, Lancet, 1902, i., p. 143.

strated that most, but not all, animals develop precipitin sera against alien bloods. The rabbit has been chiefly used in these experiments, and specific anti-sera have been developed in this animal for the blood of man, monkey, beef, goat, sheep, horse, dog, guinea-pig, hog, and many ovipara and cold-blooded animals, as the chicken, alligator, turtle, frog, lobster, eel, and crab. The writer[1] found that the chicken develops an active and highly specific serum for man and rabbit. In cold-blooded animals Mesnil,[2] v. Dungern,[3] and Noguchi[4] found normal precipitins for some alien bloods, but failed to increase them by immunization. Precipitins for the albumens of milk have been studied extensively by Bordet,[5] Fisch,[6] Wasserman and Schütze,[7] and Meyer and Aschoff,[8] who found the anti-sera more or less specific for these albumins, but affecting to some extent the blood and tissue albumens as well.

Schütze[9] produced precipitin sera for muscle and bone which were also hæmolytic, and applied them to the differentiation of bones, and, with Jess and Uhlenhuth,[10] in the detection of meats.

Albuminous exudates from the pleural or peritoneal cavity and albuminous urine have been found to yield anti-sera affecting the albumens of these exudates and of the blood (Mertens,[11] Zuelzer[12]). That obtained by Leclainche and Vallée,[13] however, was inert on blood albumens. Injections of albumen-free urine yield hæmolytic and agglutinating sera, but no precipitin.

Several observers have separated the different proteids of blood, exudates, and eggs, and tested their action apart from the mixtures in which they naturally occur.

Nolf[14] obtained precipitins by injections of plasma, but none with the blood cells of the chicken and dog. Nolf[14] and Biondi[15] failed to secure precipitins from injections of pure serum albu-

[1] Ewing, Proc. N. Y. Path. Soc., 1903, vol. iii., p. 14.
[2] Mesnil, Annal. de l'Instit. Pasteur, 1901, p. 1.
[3] v. Dungern, "Die Antikörper," Jena, 1903.
[4] Noguchi, Univ. of Penna. Bulletin, 1902, vol. xv., p. 295.
[5] See note 4, p. 862.
[6] Fisch, St. Louis Courier of Med., 1900, xxii., p. 90.
[7] See note 6, p. 862.
[8] Meyer, Aschoff, Berl. kl. Woch., 1902, p. 638.
[9] Schütze, Zeit. f. Hyg., Bd. xxxvi., p. 5; *ibid.*, Bd. xxxviii., p. 437.
[10] Jess, Berl. tierärztl. Woch., 1901, p. 633.
[11] Mertens, Deutsche med. Woch., 1901, p. 161.
[12] Zuelzer, *ibid.*, p. 219.
[13] Leclainche, Vallée, Semaine méd., 1901, p. 28.
[14] Nolf, Annal. de l'Instit. Pasteur, 1900, p. 297.
[15] Biondi, Vierteljahrsschr. f. ger. Med., 1902, Bd. xxiii., Suppl., p. 1.

men, but Obermayer and Pick,[1] Umber, Michaelis,[2] and others secured precipitins for both globulins and albumens. Yet the globulins have always proved so much more active as to lead to the conclusion that they are the chief protein which causes the development of precipitin.

Peptones have so far failed to develop precipitins, but Schütze[3] and Kowarski[4] produced non-specific precipitins with the albumens of wheat.

The observations of Obermayer and Pick[5] indicate that apparently slight alterations produced in proteins may affect in a demonstrable and specific manner the corresponding anti-sera, and illustrate the peculiar delicacy of precipitins.

They found that beef serum heated to 60° to 70° C., which destroys its reaction to anti-serum, produces in rabbits a modified precipitin serum affecting both fresh and heated beef blood, while beef globulin oxidized by potassium permanganate and thus deprived of its capacity to react to normal anti-serum develops in rabbits a serum which precipitates oxidized globulins and very slightly the fresh globulins.

This brief review of the scope of demonstrated precipitins is sufficient to emphasize from the medico-legal standpoint that the existence of a specific agent precipitating human-blood albumens is not an isolated observation, but represents a comprehensive principle in biology.

By virtue of their complex molecular constitution the various animal and vegetable proteins are found to differ not merely in some of their grosser chemical reactions, but by a new series of very delicate properties which are no more surprising and no less definite than those recognized in meats by the sense of taste. Moreover, in Ehrlich's conception of the mode of origin of precipitins and other specific anti-bodies we have a logical explanation of the phenomena which has removed much of the obscurity surrounding them. For the full discussion of Ehrlich's views the reader may consult the summaries of Ritchie[6] in English and Aschoff[7] in German.

[1] Obermayer, Pick, Wien. klin. Rundschau, 1902, p. 277.

[2] Michaelis, Deutsche med. Woch., 1902, p. 733.

[3] See note 9, page 863.

[4] Kowarski, Deutsche med. Woch., 1901, p. 422.

[5] Obermayer, Pick, Wien. klin. Woch., 1903, p. 659.

[6] Ritchie, Jour of Hygiene, 1902, vol. ii., pp. 215, 251, 452.

[7] Aschoff, Zeitschr. f. Physiol., Bd. i., 1902, p. 69.

NATURE OF THE PRECIPITIN REACTION.

It has already been shown that the substances exciting the development of precipitins are chiefly the globulins, the albumens being less active, while peptones have so far failed to develop precipitins and mucins have not been separated in sufficient purity to permit their study in this field. Likewise the active agent in precipitin serum is chiefly or exclusively the globulin.

The globulins precipitated from the serum by magnesium or ammonium sulphate contain most or all of the active agents, while the remaining albumens are practically inert (Corin,[1] Michaelis, Ziemke,[2] Pick[3]).

The precipitated substance (*precipitum*) is also a globulin, as first shown by Nolf. In milk Müller[4] found the precipitum to consist of casein, but it also contained the precipitin itself, which he succeeded in isolating in active form by strong acetic acid.

The general properties of a precipitum are those of an alkali-albumen, as it is insoluble in water or alkaline carbonates or neutral salts, but soluble in dilute acids or alkalies. The substance attacked by the precipitin, however, is not necessarily a protein, but may be merely associated with, or derived from, the proteins. Thus, egg albumen may be digested with pepsin till it no longer yields the biuret reaction, but still precipitates with anti-serum (Obermayer, Pick). The precipitable substance may, therefore, suffer considerable alteration without losing its affinity for precipitin, a fact of importance in testing decomposed blood. The precipitin is usually in much smaller proportion than the precipitable substance (Lenoissier, Lemoine[5]).

ARTIFICIAL AND SPONTANEOUS CHANGES IN PRECIPITIN SERUM.

All observers have found that precipitin serum rather rapidly deteriorates with age, and recommend its careful preservation in sealed tubes on ice and in the dark. Bacterial growth may be prevented by the addition of .5-per-cent carbolic acid or .5-per-cent chloroform, but while these antiseptics do not directly alter

[1] Corin, Vierteljahrsschr. f. ger. Med., 1902, Bd. xxiii., p. 61.

[2] Ziemke, Deutsche med. Woch., 1901, pp. 424, 731.

[3] Pick, Hoffmeister's Beiträge, Bd. i., pp. 351, 448.

[4] Müller, Münchener med. Woch., 1902, p. 272.

[5] Lenoissier, Lemoine, Semaine méd., 1902, No. 13, p. 104.

the action of the serum they do not prevent its gradual deterioration. Sera may be safely kept on ice without preservatives for at least ten days, and do not greatly diminish in strength in three months, after which they may become relatively inactive. Strauss and the writer,[1] however, obtained a pronounced reaction from a humanized serum kept with a trace of chloroform on ice for ten months. The precipitable globulins also deteriorate with equal rapidity. No method of preservation can replace the advantage of working with fresh serum.

Heat destroys the activity of precipitin sera, but at different degrees for different sera. Strauss and the writer destroyed a beef-rabbit precipitin by exposure to 55° C. for fifteen minutes, and a human precipitin at 65° C., but most observers find a trace of reaction after heating to 60° C. or 70° C., while Michaelis' experiments indicate that moderate heating merely retards the action of, but does not destroy, the precipitin. The dry globulins resist heating to 100° C., but are completely destroyed at 130° C.

Many salts, as NaCl, ammonium and magnesium sulphate, have no deleterious action on precipitins and are employed in their separation. Michaelis (*l.c.*) destroyed blood precipitin by digestion for one hour with pepsin and HCl, and removed the calcium from fresh serum by oxalic acid, without affecting its activity.

Precipitoids.

Serum which has lost its precipitating capacity, either spontaneously or by heat, is still capable of uniting with precipitable substances and preventing the subsequent action of fresh serum. It thus acts as an anti-precipitin. Such a serum is said to contain *precipitoids*. According to Ehrlich's theory, precipitoids are complex precipitin molecules which have lost the zymophore (precipitating) groups while retaining the haptophore groups by which they unite with the precipitable substance.

CHANGES IN THE PRECIPITABLE SUBSTANCE.

It is of great importance in the medico-legal use of the serum test that the precipitable substance may be exposed to a great variety of influences without losing its susceptibility to the precipitin, which is lost only when the albuminous molecule is dis-

[1] Ewing, Strauss, Medical News, 1903, vol. lxxxiii., pp. 871, 925.

sociated and loses its receptor for the precipitin. Heat affects anti-serum and fluid precipitable substance about equally, the reaction beginning to fail after short exposure above 55° C. Such heated fluids then act as anti-precipitins and neutralize fresh precipitin serum.

Ferrai[1] reports partial or complete loss of reaction from blood-stains heated to 130° C. for 1 hour; 140° for 20 minutes; 150° for 10 minutes; 160° for 5 minutes. Biondi (*l.c.*) places the limit of resistance of dry blood at above 130° C., finding some specimens to react after exposure to this temperature. Okamoto[2] obtained distinct coagula from blood-stains heated 1 hour at 50° and 100° C., but negative results with stains heated 1 hour at 150° C. Obermayer and Pick, by injections of heated serum, claim to have produced a precipitin serum which is active with heated blood.

Drying seems to preserve indefinitely the properties of the precipitable albumens of blood, but not without some loss. Ziemke (*l.c.*) secured a definite reaction from an extract of the stomach of a 10-year-old mummified cadaver, from dry stains 2, 9, 15, and 25 years old, from 5-year-old stains on rusty knives, from an 8-year-old washed stain, and from blood 1 and 3 years in earth. Yet most of the old stains did not react strongly, yielding only turbidity without flocculent precipitates, and one 10 years old on a shirt did not react at all. Uhlenhuth[3] obtained turbidities in 1 minute with stains 6 to 12 years old, but Biondi failed with one 20 years old. Graham-Smith and Sanger[4] obtained slight or marked turbidities in 5 to 60 minutes with nearly all of 29 stains 3 to 30 years old from the Scotland Yard Museum, 17 of which came from knives which had been smeared with oil to prevent rusting. They found that fluid sera and egg albumen 9 and 14 months old had lost respectively 7 and 12 per cent in the bulk of precipitin, while one specimen of egg albumen 9 months old had lost 33 per cent.

Okamoto (1903) obtained very feeble reactions from blood on wood and limestone dating from 1867 and 1874, but abundant precipitate from a dry blood clot preserved from venesection in 1874. Some observers report good reactions from decomposing

[1] Ferrai, Bollet. d. r. Accad. di Genova, 1901, an. xvi., p. 272.

[2] Okamoto, Vierteljahrsschr. f. ger. Med., 1903, Bd. xxiii., p. 207.

[3] Uhlenhuth, Deutsche med. Woch., 1901, p. 260.

[4] Graham-Smith, Sanger, Jour. of Hygiene, 1903, vol. iii., pp. 258, 354.

blood and from mixtures of several bloods, and Graham-Smith and Sanger found a decrease of precipitin, 20 to 30 per cent, in albuminous fluids in which various putrefactive bacteria were grown for 36 to 50 days. The presence of ammonia in old or decomposed blood may prevent precipitation (Okamoto).

Action of Acids.

As the precipitum is soluble in dilute acids and alkalies, any great variation from a neutral reaction of the tested solution must be avoided. The precipitum thus dissolved is reprecipitated by neutralization. Graham-Smith and Sanger (*l.c.*) tested the action, in .6-per-cent salt solution, of various acids—sulphuric, nitric, hydrochloric, acetic, oxalic, tartaric, carbolic, picric, citric, and salicylic. All these in dilutions up to 1 in 10,000 caused turbidities on addition of test-serum, except carbolic and salicylic, which were inert in dilutions of 1 in 1,000 or above. Strong alkalies were less uniform in action, caustic potash and soda causing turbidities up to 1 in 1,000 dilution, while sodium carbonate and ammonia were inert at 1 in 10 and above and were therefore available for neutralization of acid fluids. Small quantities of acid or alkali, especially of acid, diminished the quantity of precipitum. In testing old blood-stains from leather they found the solutions acid and requiring neutralization by sodium carbonate before adding the serum. A thick polished yellow leather gave a highly acid reaction, and no method of neutralization could be found which permitted the application of the test. Okamoto and the writer encountered spontaneous precipitates in solutions of blood-stains on leather. In the writer's case the solutions were neutral, and after filtration of the spontaneous precipitate the fluid continued to precipitate various non-specific anti-sera subsequently added, apparently from the presence of tannin.

The Action of Neutral Salts on the precipitable substance has been studied by several observers with conflicting results. A certain proportion of salt, preferably .6 to .8 per cent, must be present to prevent spontaneous precipitation of albumins, and the majority of writers agree that normal salt solution is the best solvent for dried blood-stains. Turbidities arise on addition to tested fluids of sodium and potassium tar-

trate, 10 per cent; sodium acetate, potassium cyanide, and borax, 1 per cent; while sodium citrate, potassium nitrate and chlorate are inert.

Action of Earth on Blood.

Graham-Smith and Sanger mixed equal parts of human serum with detritus of chalk, red brick, Pasteur filter, Berkefeld filter, ordinary earth, white brick, mortar, and lime, one specimen of each being kept dry and one wet for four days, with the result that there was in all well-marked diminution of precipitum, average 20 to 30 per cent, while mortar and lime completely destroyed the precipitin reaction. They found that the lime in ordinary earth precipitates test serum and must be removed by a current of CO_2, which does not interfere with the precipitin reaction, but that the quantity of lime in ordinary earth does not seriously affect the precipitable substance of blood mixed with it. The writer failed to obtain a precipitate from human blood exposed to the weather and mixed three months with earth containing much vegetable matter. Ziemke's results with certain specimens of blood one to three years in earth must be regarded as negative, and Okamoto obtained spontaneous precipitates in solutions of blood in sand and mortar.

Effect of Antiseptics.

Carbolic acid and chloroform, if present in 1-per-cent strength, cloud blood solutions; mercuric bichloride and silver nitrate at 1 in 10,000, copper sulphate at 1 in 100,000, formalin, thymol, benzol, toluol, xylol, and ether, at 1 in 1,000.

Results Obtained from Blood-stains on Miscellaneous Materials.

The writer obtained a spurious reaction from blood-stains on wall-paper. A neutral solution from the unstained paper gave the same reaction.

Graham-Smith and Sanger report spurious reactions from ten samples of wall-paper. They secured good reaction from a large stain on oak wood, but failed with small stains on cedar and pine. Most observers have had no difficulty with stains on wood. I have found the presence of starch to interfere with the reaction.

SPECIFICITY OF PRECIPITIN REACTIONS.

The reactions of precipitin sera are not, in one sense, strictly specific, since there are only quantitative differences in the reactions produced by a given anti-serum in its homologous blood and in those of closely related animals. Nevertheless, these quantitative differences are so great as to constitute a virtual difference in quality. A powerful anti-beef serum used in concentrated form precipitates not only beef blood but also the blood of the sheep and the goat, although to a much less extent. Nuttall (*l.c.*) has shown that the action of a powerful precipitin serum extends in diminishing intensity, and with some striking exceptions, over classes or subclasses in the animal kingdom, and he describes a mammalian, an avian, and a reptilian reaction, on evidence that a serum prepared against a mammal affects slightly the blood of all mammals, while one prepared against the fowl is more or less active with many birds. Much finer subdivisions of these reactions, however, are possible, since a humanized serum has little effect on any but human and monkey blood, and an anti-beef serum is comparatively inert on all but beef, sheep, and goat bloods. In order to define a reaction which can occur only with homologous blood it has been found necessary to consider:

(1) The Dilution of the Test Serum.
(2) The Potency of the Test Serum.
(3) The Character of the Precipitate.
(4) The Time Limit.

(1) The Dilution of the Test Serum.

The serum must be added to the tested blood in such dilution that the reaction in heterologous bloods shall be very faint or absent.

A powerful humanized serum will cause a flocculent precipitate in human blood solutions 1 in 100 in 3 hours or less, when the test serum is added in dilution of 1 in 200. Such a serum added in dilution 1 in 10 may cause marked turbidities or flocculent precipitates in the blood of several domestic animals, but if diluted as much as 1 in 30 it will not cause more than a slight turbidity in any but human or monkey bloods. Kister

and Wolf,[1] and Strauss and the writer, have shown that this dilution is sufficient to rule out most reactions of precipitin sera on heterologous bloods. A dilution of 1 in 50 may therefore be described as a safe limit at which the occurrence of a flocculent precipitate in 3 hours indicates positively the presence of human or monkey blood.

(2) The Potency of the Serum.

The test serum should be of sufficient strength to cause a flocculent precipitate in 3 hours in human serum diluted 1 in 100 when the test serum is added in proportion of 1 of test serum to 100 of blood solution.

Most humanized test sera secured after eight to ten injections are much more active. The potent sera so far observed have shown far greater increase in activity over homologous than over related bloods. A potent serum, moreover, permits a dilution far beyond the point where heterologous blood reacts and is needed to demonstrate the character of very old or very small stains.

(3) The Character of the Precipitate.

It is a very striking distinction between reactions in homologous and those in heterologous bloods, that the turbidities in the former rapidly become flocculent.

Moreover, the development of a flocculent precipitate in about three hours visible to the naked eye is a criterion which effectually escapes the influence of the personal equation. This phenomenon has therefore been widely recognized as a most reliable indication of a specific reaction. Strube[2] has insisted that it is the only result which can warrant a positive opinion, but it cannot always be secured in very dilute solutions or with very old specimens of blood. Nevertheless, observations on old specimens of known human blood have shown that the reactions may not pass beyond the point of pronounced turbidity in three or four hours, and there seems to be no sufficient reason why such turbidities, under proper control tests, should not be accepted as specific.

Nuttall judges the reactions by measuring the bulk of precip-

[1] Kister, Wolf, Zeitschr. f. Hyg., Bd. xli., p. 410.

[2] Strube, Deutsche med. Woch., 1902, p. 425.

itum after twenty-four hours, but this method is not fortunately adapted to medico-legal work as it offers opportunity for the entrance of several disturbing factors. Nevertheless, the bulk of precipitum produced in human blood by specific serum is so much greater than that forming in any other than human or monkey blood that this evidence is often very convincing.

(4) The Time Limit.

The great majority of observers have found that when a precipitin serum of ordinary strength is added to a solution of homologous blood a flocculent precipitate forms in at least three hours at 37° C. After this time the result is apt to be obscured by bacterial growth and the appearance of reactions in heterologous bloods. Hence by very general consent the requirement of a flocculent precipitate in about three hours has come to be accepted as an essential requirement of a specific reaction. This arbitrary requirement errs on the side of extreme caution, since even with dilutions of serum 1 in 20 turbidities in heterologous blood seldom become flocculent in less than 12 hours, while in dilutions of humanized serum of the prescribed 1 in 50 one will obtain no flocculent precipitate in any but human and monkey bloods within 12 hours. When dealing with old specimens of blood which gradually lose their reaction to precipitin serum this time limit may safely be increased, or a pronounced turbidity may be accepted, or it may be permissible to judge of the extent of the reaction from the bulk of precipitum found after 24 hours. In such cases also the strength of the serum may be increased to 1 in 30 or 1 in 20, with the control tests mentioned later. Yet with each concession of this sort the results become less positive and the conclusions to be drawn remain a matter of opinion on the part of the examiner, who must consider all the circumstances of the case. It is under these conditions that the behavior of control tests becomes of decisive importance.

THE DIAGNOSIS BETWEEN MONKEY AND HUMAN BLOOD.

Five methods have been employed for this purpose:

(1) The progressive dilution of the test serum.

(2) The progressive dilution of the tested blood.

(3) The absorption of the monkey receptors in the serum by monkey blood.

(4) The use of a humanized serum prepared in the monkey.

(5) The method of complement fixation.

(1) The writer has found that fresh blood serum of the lower monkeys fails to react to certain powerful humanized rabbit sera when these test sera were diluted 1 in 100, but the blood of the higher monkeys (orang, chimpanzee) still reacted faintly at 1 in 200 dilution of test serum, indicating that humanized rabbit serum is incapable of positively distinguishing between dried specimens of human and higher monkey blood.

Precipitin sera vary not only in strength, but in specificity of action. The writer found that the chicken produces a much more specific humanized serum than the rabbit, two such sera failing to precipitate lower-monkey blood in any dilutions, while at dilution of 1 in 200, although still actively affecting human blood, they failed to yield a floeculent precipitate in the fresh blood of the orang or chimpanzee in three hours; in fact, caused only a moderate turbidity in these monkey bloods. While, therefore, it is possible by careful calibration of the test serum to distinguish higher-monkey blood from human by the precipitin test, it is clearly a delicate undertaking, and until further observations are at hand it would be unwise for the medico-legal expert to claim that a given specimen yielding the reactions of human blood may not be that of an anthropoid monkey.

(2) The differentiation of related bloods may be facilitated, as shown by Layton,[1] by varying the dilution of the tested blood, but the results are much less striking than those which follow successive dilutions of the test serum. Moreover, it is impossible to estimate the dilution of dried blood. It has been found that the dilution of blood albumens most favorable for the rapid formation of floeculi is about 1 in 50 or 1 in 100.

(3) It may prove possible to render a humanized rabbit serum more specific against human blood by absorbing it with the blood of monkeys. The remaining receptors of the filtered serum should be active only against human-blood proteid.

Weichardt[2] claims to have succeeded by this method in dis-

[1] Layton, American Medicine, 1903, vol. v., p. 913.

[2] Weichardt, Hygien. Rundschau, 1903, Bd. xiii., p. 756; Vierteljahr. f. ger. Med., 1905, Bd. xxix., p. 19.

tinguishing not only between human and monkey blood, but even between the blood of different human beings. For this purpose he prepared a serum of moderate potency secured by five daily injections of 1 c.c. each of blood in a rabbit. This serum he twice precipitated with one-tenth its volume of monkey serum, passing it rapidly through a clay filter, after fifteen hours' contact in the ice-chest. Of this absorbed serum 0.5 c.c. added to 0.1 c.c. of human blood, the mixture being brought up to 10 c.c. bulk, gave turbidity in fifteen minutes, and a flocculent precipitate in five hours, while with two monkey sera (not named) nine hours elapsed before a fine precipitate formed. These results showed that the serum was not completely absorbed, and they are not more definite than those secured by high dilutions of potent sera, while the technique is more uncertain.

(4) Uhlenhuth[1] has been able to distinguish between human and lower-monkey blood by using the serum of lower monkeys (*Macacus rhœsus* and *Cercopithecus fuliginosus*) immunized against human blood. He was unable to test this serum against the blood of higher monkeys.

(5) For this method see section on Complement Fixation.

TECHNIQUE.

The Production and Use of Precipitin Serum.

Animals.—The rabbit is usually chosen for the production of the serum. Large healthy field-rabbits or hares should be selected, and they must be housed under good hygienic conditions. The writer has obtained more specific serum from the chicken, which is a hardier animal than the rabbit.

Preparation of Injected Material.

Fresh human blood expressed from the placenta or cord, and defibrinated by shaking in a sterile flask containing beads, is much superior to any albuminous exudate. In its absence one may employ pleuritic exudate or ascitic fluid, but albuminous urine is uncertain in its action and often poisonous. Uhlenhuth and Grigorjew employed a solution of dried blood.

[1] Uhlenhuth, Deutsche med. Woch., 1905, p. 1673.

Methods of Injection.

The intraperitoneal is the preferable route. Subcutaneous injections frequently cause abscesses, but the intravenous injections may give more rapid results. Ten c.c. of blood may be used from the first, but the initial injections may well be limited to 5 c.c. A 10-c.c. syringe with rather large needle is required. The animal is held by the ears, an area of skin over the lower abdomen shaved and sterilized, and the needle inserted carefully to avoid puncture of the intestine. The interval between injections should be uniform, but must be determined by the health of the animal. If it loses weight or appears sick treatment must be omitted. A four-day interval is usually adopted.

From six to ten injections are required to develop a serum of proper strength, but animals vary greatly in their capacity to develop precipitins, some failing entirely to yield a good serum, while others show pronounced activity after three or four injections. There is sometimes an advantage gained by increasing the amount and the rate of injections.

Drawing and Preservation of Serum.

As each injection causes a temporary diminution in the amount of free precipitin in the blood, an interval of at least six or seven days should elapse between the last injection and the drawing of blood. Sufficient blood may be obtained from a transverse incision of the sterilized lateral ear vein from an animal suspended head downward or wrapped in a blanket with a warm water-bag. The serum exudes promptly from clots forming in the test tubes laid nearly horizontal.

If the work has been clean bacteria seldom develop in serum preserved on ice without the addition of any antiseptic, but chloroform or carbolic acid, not more than .5 per cent, may safely be added to prevent decomposition. The drawn serum should be used as soon as possible, but it usually remains of undiminished activity for two to three weeks, and may still be active after several months.

Preparation of the Stain for Testing.

The best solvent for dried blood is .6 to .8 per cent solution of NaCl c.p. Very old stains may require maceration for some hours, and the presence of albumens in solution may be determined by Nuttall's foam test developed by shaking the fluid. One-tenth-per-cent soda solution has been recommended as a more active solvent, but this amount of soda may cause spontaneous precipitation in any blood serum.

The use of potassium cyanide with subsequent neutralization by tartaric acid in substance has not been proved a reliable solvent. The solution need not be colored, as Ziemke obtained a reaction from a solution too weak to give spectroscopic bands. It must be perfectly clear, and after extraction in a clean watch glass the fluid may be filtered through Schleicher's filter paper, blue label, which clears the great majority of fluids. An asbestos filter or the centrifuge, or a small Berkefeld or Chamberlain filter, may be required. The solution should not be very concentrated.

Small test tubes, diameter not less than .5 cm., are required in the work, and these should be cleaned without alkali, sterilized, and polished. The fluids may be handled with small sterile pipettes. Ten drops of the solution or its multiple should be placed in a tube and the serum, properly diluted, should be added in such quantity that the final dilution shall be at the limit desired, which is usually 1 in 50. For ten drops of solution this requires therefore the addition of one drop of test serum diluted by adding four drops of salt solution to one of pure serum. All test solutions should be placed in the thermostat and observed at frequent intervals, but after three hours they should be transferred to the ice-box to prevent bacterial growth.

Controls.

Without the rigid employment of certain control tests the results of the serum method are valueless for medico-legal purposes.

(*a*) One must demonstrate that a precipitate obtained in a solution of suspected human blood is not of spontaneous origin, for which purpose it is necessary to carry through a solution of

the stain which received no other treatment than that required in its preparation.

(*b*) Since the solution may contain some agent which slowly precipitates foreign albumens, it is necessary to carry through a specimen which receives the same quantity of some other antiserum. In testing for human blood the writer has used for this control a potent beef-rabbit serum, but normal rabbit serum may perhaps suffice.

(*c*) A third control giving very welcome corroborative evidence is secured where one carries through a known specimen of human blood of appropriate dilution to which is added the usual quantity of test serum.

(*d*) As there is considerable variation in the specificity of different sera, it is desirable to test each serum on human blood and on that of several domestic animals, to determine not only the strength of the serum, but also its effects on heterologous bloods. This control is the more necessary with the very potent sera.

(*e*) If the observation extends over three hours the precipitum must be examined for the presence of multiplying bacteria which may of themselves precipitate albumens or simulate an albuminous coagulum.

(*f*) Since any albumen from the human body may respond to humanized serum, it must first be determined by the hæmin or spectroscopic tests that the material is blood.

While it is possible that the blood of a domestic animal may be mixed with human albuminous exudates, as sputum, pus, urine, or fæces, such a combination must be exceedingly rare. A microscopical examination will determine the presence of mucus in sputum, excess of leucocytes in pus, and fecal detritus. In the writer's tests highly purulent or albuminous sputum, or diarrhœal fæces, were required to yield definite reactions with humanized sera. The gross appearance of the stain will usually determine the possibility of mixture with albuminous urine, or the demonstration of characteristic crystals of nitrate of urea may be undertaken.

THE FORENSIC SIGNIFICANCE OF THE BORDET-GENGOU-MORESCHI PHENOMENON (COMPLEMENT FIXATION).

In 1901 Bordet and Gengou[1] observed that when a precipitable protein is added to its homologous anti-serum the resulting union of precipitin and precipitable substance carries down with it any complement present in the fluids, although no complement is necessary to bring about the precipitation. This phenomenon has been called "complement fixation," and it is to be distinguished from the phenomenon of Neisser and Wechsberg, "complement deviation," in which the complement is present but is rendered inactive for other reasons. Moreschi[2] has shown that complement fixation occurs when very slight and entirely invisible reactions occur between precipitable proteins and their anti-sera. The delicacy of the reaction suggested to Neisser and Sachs[3] that the phenomenon might be of forensic value in the identification of blood-stains, and they claim to have distinguished in this way very minute quantities of human blood from that of monkeys and other lower animals.

The method employed to demonstrate the mechanism of complement fixation is as follows: Two mixtures are prepared: (1) Washed sheep red cells (freed from complement), plus heated inactivated hæmolytic serum prepared in the rabbit against sheep red cells (amboceptor, no complement). This mixture provides sensitized red cells ready to be hæmolyzed by the addition of any complement. (2) Fluid containing bacterial protein, plus specific precipitin anti-serum for the bacterial protein, and complement. In this mixture the precipitin unites with the precipitable protein, and at the same time fixes the complement present, so that on adding No. 2 to No. 1 hæmolysis does not take place.

If in mixture No. 2 either bacterial protein or precipitin is lacking the complement is not fixed, and on addition of No. 1 to No. 2 the active complement unites with the amboceptor already attached to the red cells, and hæmolysis follows.

In applying the test to blood-stains four solutions are employed: (1) A solution of the stain in normal salt. (2) Normal rabbit serum, which hæmolyzes sheep red cells. (3) Humanized

[1] Bordet, Gengou, Annal. de l'Institut. Pasteur, 1901, p. 283.

[2] Moreschi, Berl. kl. Woch., 1905, p. 1181.

[3] Neisser, Sachs, Berl. kl. Woch., 1906, p. 1388.

rabbit precipitin serum. (4) A 5-per-cent suspension of fresh sheep blood in normal salt solution.

Neisser and Sachs[1] have determined that the minimal amount of normal rabbit serum completely dissolving 1 c.c. of 5-per-cent suspension of sheep blood is .25 c.c., and in all tests they employ this constant quantity. They have also found that .02 c.c. of precipitin serum is the optimum proportion, and this amount is employed in each test.

In performing the test .25 c.c. of normal rabbit serum is mixed with .02 c.c. of precipitin serum, and to several such tubes are added varying amounts of the suspected solution, and the mixtures are placed in the thermostat at 37° C. for 1 hour. Then follows the addition of 1 c.c. of sheep-cell suspension, and the tubes are now placed in the thermostat for 2 hours. The failure of hæmolysis indicates the presence of human blood in the suspected material.

The results obtained by Neisser and Sachs with known quantities of fresh human serum are indicated in the accompanying table:

Human Serum.	Normal Rabbit Hæmolytic Serum.	Precipitin Serum.	Hæmolysis of 1 c.c. of 5-per-cent Sheep Blood.
1/1,000.....	0.25	0.01	0
1/10,000.....	0.25	0.01	0
1/100,000.....	0.25	0.01	0
1/1,000,000.....	0.25	0.01	Slight
1/10,000,000.....	0.25	0.01	Strong
1/100,000,000.....	0.25	0.01	Complete
0.....	0.25	0.01	Complete

While the method of Neisser and Sachs may prove to be sufficiently exact for medico-legal purposes, it would seem desirable to employ the more delicately balanced hæmolytic mixtures used in bacterial research. In this field it has been found necessary to control the amounts of the several agents entering into the reaction. This is necessary because the precipitin reaction does not fix an unlimited amount of all complements present in serum, but only limited amounts of some complements (Muir and Martin[2]). According to Gay,[3] there is a quantitative relation

[1] Neisser, Sachs, Berl. kl. Woch., 1906, p. 67.

[2] Muir, Martin, Jour. of Hygiene, 1906, vol. vi., p. 265.

[3] Gay, Annal. de l'Instit. Pasteur, 1905, p. 593.

between the amount of precipitate and complement fixation. Hence if complements are in excess a delicate precipitin reaction may fail to fix enough of them to influence the final hæmolysis, and a misleading negative result is obtained. In order to secure a delicately balanced hæmolytic mixture it is necessary to work with the following factors:

(1) An immune hæmolytic serum prepared in the rabbit by 4 or 5 injections of 3 to 5 c.c. of sheep blood. This serum should be heated ½ hour at 55° C., and thus inactivated it contains only immune amboceptor, but no complement. It should be kept on ice.

(2) A 5-per-cent suspension of sheep red cells washed 3 times in .8-per-cent salt solution, at a low temperature.

Torrey and Teague,[1] in the Loomis Laboratory, find that .5 c.c. of a 1-to-50 dilution of this hæmolytic serum added to .5 c.c. of the suspension of washed sheep cells is usually the minimum amount required completely to hæmolyze the cells in 2 hours at 37° C. when the proper amount of complement (described later) is added. As an excess of free amboceptor in the hæmolytic indicator may interfere with the complement action it is better, after the addition of hæmolytic serum, to wash the red cells twice in cold salt solution and bring the suspension of cells up to the original bulk, 1 c.c., with salt solution. Reagents (1) and (2) may thus be combined and designated as 5-per-cent suspension of sensitized red cells.

(3) Normal rabbit serum containing complement.

The amount of complement required must be determined by experiment with the sensitized red cells. For this purpose take 10 tubes, each with .5 c.c. of sensitized cell suspension, and add .5 c.c. of complement serum in several dilutions from 1 in 10 up to 1 in 100, and incubate 2 hours. The greatest dilution of complement serum which suffices to bring about distinct hæmolysis in the trials should be employed in the final tests.

(4) Humanized rabbit precipitin serum heated one-half hour at 55° C.

It has been abundantly shown, among others by Friedberger[2] and Liefmann,[3] that this treatment does not interfere with the

[1] Torrey and Teague, communicated.

[2] Friedberger, Deutsche med. Woch., 1906, p. 578.

[3] Liefmann, Berl. kl. Woch., 1906, p. 448.

complement-fixing power. The optimum amount of this serum to be used must also be determined by experiment. Using a 1-in-10,000 solution of known human serum one should make fixation tests with sensitized red cells and complement serum in the dilution chosen above and with precipitin serum in several dilutions from 1 in 10 to 1 in 100, using .5 c.c. of each reagent. The greatest dilution which fixes the complement and prevents hæmolysis in the system should be used in the final tests. This determination is necessary because in excess of precipitin serum the pre-zone phenomenon of Neisser and Wechsberg may appear and prevent fixation of complement (*cf.* Morgenroth, Stertz[1]).

(5) A solution of the stain in .8-per-cent salt.

The strength of this solution must always remain more or less indeterminate, since the solubility of blood-stains and their capacity to react with precipitin serum vary. The chief danger is that the solution will be too strong. Friedberger[2] found that human sweat in the dilution of 1 in 10,000 deviates complement, hence the entire system must be adjusted to a dilution of human blood serum of at least 1 in 10,000. As human sweat can never enter into the suspected stain in the concentration found in Friedberger's[2] test specimen, a dilution beyond 1 in 10,000 is not necessary. At present such a dilution from a dried stain can only be determined approximately.

With these preliminary tests accomplished, the final test may be carried out as follows:

To .5 c.c. of the stain solution add .5 c.c. of the precipitin serum in the chosen dilution, and .5 c.c. of the complement serum in the chosen dilution, and incubate 2 hours at 37° C. Then add .5 c.c. of the sensitized red-cell suspension and incubate again 2 hours. Readings should be taken at once and after 24 hours in the ice-chest. Failure of any trace of hæmolysis at either of these readings indicates a positive reaction for human blood.

Various controls must be carried through to eliminate errors.

(1) As the fixation of complement may be due to non-specific substances, one control should substitute normal rabbit serum for precipitin serum.

(2) A known specimen of human serum, dilution 1 in 10,000,

[1] Morgenroth, Stertz, Virchow's Archiv, 1906, Bd. clxxxviii., p. 166.

[2] Friedberger, Deutsche med. Woch., 1906, p. 578.

should be used to demonstrate that the system is properly adjusted.

(3) If the quantity of the stain will permit, other higher dilutions of the original solution should be employed.

It is too early to predict the final position of the complement-fixation test in forensic blood diagnosis. The extraordinary delicacy of the reaction is both its strong and its weak feature. Friedberger finds that the reaction occurs with dilutions of blood fifty million times greater than is required to give the precipitin reaction, and Bruck [1] claims to have demonstrated by this method marked distinctions between the blood of Europeans and of Chinese, and, still further, of Malayans. The technical difficulties are so great that the test can be satisfactorily performed only in a laboratory where serum work is being pursued, but for one accustomed to this work the difficulties are not extreme. Uhlenhuth [2] would limit the method to corroboration of the precipitin test, and claims to have gotten complement fixation with a variety of non-specific substances, but his controls were not adequate. There appears to be no real necessity for performing the complement-fixation test when the precipitin test is positive and satisfactory.

When the precipitin test is negative because the stain is old, altered, or scanty, the complement-fixation test should be used, but the influence of changes in the blood which prevent the precipitin reaction remains to be determined.

Since the principles of the test are well founded, the certainty of its results must depend on the skill and experience of the operator. At present the technical details and the sources of error have not been sufficiently studied to warrant exclusive reliance on this test, or the recommendation of its use outside the experimental laboratory.

MISCELLANEOUS METHODS IN DIFFERENTIATION OF BLOODS.

By the Form of Hæmoglobin Crystals.

It has long been known that hæmoglobin crystals vary in form, color, and rapidity of formation in different animals, and attempts have been made to distinguish human from other bloods

[1] Bruck, Berl. kl. Woch., 1907, p. 793.

[2] Uhlenhuth, Deutsche med. Woch., 1906, pp. 1244, 2072.

on this basis. Dvornitsehenko[1] eoneluded from a eomparative study of hæmoglobin crystals that flat rectangular plates are characteristie of human hæmoglobin. Moser[2] believes it possible to distinguish human blood with eertainty by the charaeter of the hæmoglobin erystals, and finds that their form is but slightly affeeted by moderate degrees of putrefaetion of the blood.

The test is applicable only to fresh blood or comparatively recent stains in whieh the Hb has not been reduced to hæmatin. Both the above observers attempt to secure erystals by allowing a drop of solution of the stain in distilled water to fall on a glass slide, and after drying around the edges it is eovered with a eover-glass to prevent evaporation before the crystals form. If no erystals form, the solution should be exposed to air for some days to transform the oxy-Hb to redueed Hb which erystallizes more readily. Moser obtained the best crystals by allowing solutions of blood to stand in open vessels for 2 to 10 days. Human Hb crystallizes usually in 24 to 48 hours.

By the Odor of Blood.

Barruel[3] has elaimed that the odor of dry blood treated with sulphurie aeid is eharaeteristie of eaeh species of animal.

By the Resistance of Oxy-Hb to Acids and Alkalies.

It was first shown by Körber,[4] and fully demonstrated by Krüger,[5] that oxy-Hb of different animals shows very different degrees of resistanee to acids and alkalies before it is transformed to redueed Hb, as indieated by the fading of the spectroseopic bands of oxy-Hb. Using 25 e.e. of $\frac{N}{10}$ sodium-hydrate solution to .005 gram oxy-Hb, Minganimi[6] found that human hæmoglobin lost its speetrum in 31 minutes. He tested stains 2 months old sueeessfully, using the spectrophotometer to determine the quantity of Hb in solution. Ziemke[7] had no diffi-

[1] Dvornitschenko, Vierteljahrsschr. f. ger. Med., 1901, Bd. xxii., p. 12.

[2] Moser, *ibid.*, 1901, Bd. xxii., p. 44.

[3] Barruel, Annal. d'Hygiène publ., 1829, p. 267. See Fleming, Amer. Jour. Med. Sci., 1859, vol. xxxv., p. 98.

[4] Körber, "Ueber Differenzen d. Blutfarbstoff.," Inaug. Diss., Dorpat, 1886.

[5] Krüger, Zeitschr. f. Biol., 1888, Bd. xxiv., p. 312.

[6] Minganimi, cit. by Ziemke.

[7] Ziemke, Vierteljahrsschr. f. ger. Med., 1901, Bd. xxii., p. 77.

culty in distinguishing by this method known quantities of fresh human blood taken from healthy and diseased subjects and that of many domestic animals, the hæmoglobin of the cat furnishing the nearest approach to human, but requiring 28.8 minutes for decomposition by $\frac{N}{10}$ KOH to 5.6 minutes for human blood. To determine the quantity of fresh Hb in solution he used Gowers' hæmoglobinometer. Solutions in .1-per cent soda of old blood-stains containing methæmoglobin were treated with a few drops of Stokes's reagent, and then shaken in the air until oxy-Hb was secured and the usual test performed on this solution. A human stain thus treated required forty minutes for the transformation of oxy-Hb, while dog blood two months old required two hours. The method is applicable only to stains which have not been reduced to hæmatin, and the approximate age of the stain and the strength of the solution must be determined.

Marx and Ehrenrooth[1] claim that if one adds dissolved human blood-stain to a thick suspension of human red cells in .8-per cent NaCl and no agglutination of the cells follows, the diagnosis of human blood is justified. If the agglutination is prompt and is followed by hæmolysis, the serum is certainly from a lower animal, while slow agglutination without hæmolysis suggests human serum. Southerland[2] has shown that this method is unreliable.

[1] Marx, Ehrenrooth, Münchener med. Woch., 1904, p. 696; Cent. f. Bacteriol., 1906, Bd. xli., p. 140.

[2] Southerland, "Blood Stains," 1907, p. 72.

SEMINAL STAINS.

THE detection of seminal stains becomes of medico-legal interest in cases of rape or sodomy, and sometimes in connection with homicide.

THE SEMEN is a thick albuminous fluid of pale whitish or yellowish color referable to spermatozoa and epithelial cells. It has a peculiar odor contributed by mixture with prostatic secretions and residing in certain characteristic phosphatic crystals of spermin (Boettcher's[1] crystals) (Fürbringer[2]). These crystals are four-sided monoclinic prisms of variable size, but usually large, 40 to 60μ, and resembling triple phosphate, but others are very minute spindles or needles. They differ from Charcot-Leyden crystals in being soluble in formol, and they dissolve slowly in water, acids, and alkalies, but not in salt solution, alcohol, ether, or chloroform. With Florence's[3] reagent they turn bluish-black.

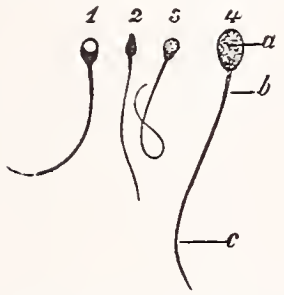


FIG. 34.—Spermatozoa. 1, 2, 3, Human; 4, bull. *a*, Head; *b*, connecting piece, and *c*, chief piece of the tail. 1, 3, and 4, Surface views; 2, side view. × 360. (After Stöhr.)

On chemical analysis semen yields 90 per cent of water, and 10 per cent of solids, of which 6 per cent are organic and 4 per cent inorganic. The inorganic salts are chiefly calcium phosphates and sodium chloride.

The *spermatozoa* are motile filamentous bodies consisting of a head and tail. The head, in man, is pyriform when viewed on the side, oval when seen from the surface, with a length of 3 to 5μ ($\frac{1}{3,300}$ to $\frac{1}{4,500}$ inch), and a breadth of 2 to 3μ ($\frac{1}{16,000}$ to $\frac{1}{9,000}$ inch). Its pointed end is homogeneous and highly refractive. The tail is a filament composed of delicate fibrils about which, in birds and tailed amphibia and rarely in man, is a spirally

[1] Boettcher, Virchow's Archiv, 1865, Bd. xxxii., p. 525.

[2] Fürbringer, Virchow's Jahresber., 1881, i., p. 240.

[3] Florence, Arch. d'Anthropol. Crim., 1896, p. 146.

wound filamentous hyaline membrane. The thickest portion of the tail is nearest the head where it measures 1μ, gradually diminishing toward the extremity. The length varies from 45 to 75μ ($\frac{1}{1,000}$ to $\frac{1}{400}$ inch).

Boston[1] gives the following table of measurements in micra of spermatozoa of various animals:

Source.	Total Length.	Heads.		Tail Length.
		Length.	Width.	
Man	51– 58	4– 6	3– 4	41– 53
Dog	67– 74	4– 8	3– 4	59– 67
Rabbit	51– 66	6– 9	3– 4	45– 58
Horse	64– 67	6– 8	6	54– 60
Bull	87– 93	9	6	77– 83
Sheep	83	9	3– 3	74
Cat	58– 74	7	3– 4	53– 66
Mouse	120–158	8– 9	....	112–138
White rat	225–238	12–16	7–11	209–222
Guinea-pig	113–138	6–12	....	102–132

The movements of the spermatozoon are executed by the cilium alone, which propels the head, and beginning first in the seminal vesicles and prostate they continue twenty-four to forty-eight hours after death and for a week or longer periods in the alkaline mucus of the cervix and uterus. Water, acids, and metallic salts inhibit the movements.

The spermatozoa are nuclear structures, motile chromosomes, the head being rich in nucleinic acid, and the tail containing albumen, lecithin, cholesterin, and fat, while both contain much mineral matter. They are therefore remarkably resistant to chemical agents, being incompletely soluble in concentrated sulphuric, nitric, and acetic acids, or hot soda solution, and resisting decomposition and drying.

Seminal stains may be pure or mixed with mucus, pus, fæces, urine, or other foreign organic or inorganic material, and the gross appearance of the stain will vary accordingly. Owing to its tenacious physical properties, semen clings firmly to the clothing, penetrates cloth much more readily than blood or mucus, and on drying gives a glazed opaque appearance to transmitted light and a starched consistence to the fabric. The color is gray

[1] Boston, Journal of Applied Microscopy, 1901, vol. iv., p. 1360.

or yellowish, the outline irregular, and on softening with water a mucinous quality is recognized, and a faint characteristic odor may be detected. Orfila states that if held near a flame seminal stains become pale yellow, while other dry albuminous stains do not change their color.

The detection of semen may also be required in fluid mucous discharges, urine, solid concretions from the genitals, or on the genital hairs, when the gross examination is of slight moment.

METHOD OF EXAMINATION.

The positive identification of semen can be accomplished only by the detection of spermatozoa under the microscope. If the material is fluid it is diluted in salt solution, examined in a thin layer under a cover-glass and by a moderately high-power lens. Dried smears of the fluid stained by eosin and methylene blue greatly assist in their identification, especially when the spermatozoa are fragmented.

Whitney recommends staining dried specimens successively with watery eosin and watery methyl green in order to bring out the rather specific structure of the head.

From dry stains the restoration of spermatozoa is accomplished by softening fluids, as in the case of blood-stains, but the manipulation must be more delicate than with blood because the dried spermatozoa are brittle and may be badly comminuted by careless teasing of the fabric. Some recommend that the stained material be softened by water, or dilute glycerin, or sodium-hydrate solution tinged with eosin or iodine, and an impression of the stain taken by pressing a glass slide upon it. On withdrawing the slide intact spermatozoa usually adhere to the surface and are readily identified either fresh or after staining. Usually it is necessary carefully to tease apart the suspected material in softening fluid and examine it under a cover-glass, when some intact and some fragmented spermatozoa are commonly detected.

Grigorjew[1] finds that semen on cloth or mixed with fæces or organic material is best examined after treatment with concentrated sulphuric acid for four to seventy-two hours, which dissolves the organic matter while leaving the resistant spermatozoa nearly intact and plainly visible in the transparent fluid. For

[1] Grigorjew, Vierteljahrsschr. f. ger. Med., Bd. xxiv., p. 82.

stains on insoluble material which cannot be treated in this way he uses glacial acetic acid, which renders the heads more distinct while clearing up much detritus.

In the microscopical examination, especially of stained preparations, one may detect besides spermatozoa many epithelial

FIG. 35.—Different Crystals Forming in Semen some Time after Ejaculation. × 500. 1, Crystals of phosphate of spermin; 2, needles of fatty acids; 3, crystals of ammonio-magnesium phosphate. After Deguy and Guillaumin, "Traité de Microscopie Clinique," Paris, 1906.

cells, pigmented if from the seminal vesicles, prostatic concretions, albuminous granules, red cells, and leucocytes. The spermin crystals are frequently found in dry semen, but should be cautiously differentiated from triple phosphate.

The recognition of spermatozoa presents no difficulties if complete individuals are encountered, while no reliance whatever can be placed upon the discovery of probable fragments of the tail. A distinct head and considerable portion of the tail cannot, however, be mistaken for any other object in nature. The *Tri-*

chomonas vaginæ often mentioned as resembling spermatozoa has a globular head several times larger, several cilia, and a short tail. Besides the spermatozoa one should carefully note all other elements which appear under the microscope, such as fragments of cloth, hairs, red and white blood cells, etc., all of which may later prove of significance in the case.

Results of Examination.

While the detection of spermatozoa is a positive indication of the presence of semen, a negative result does not exclude its presence. Spermatozoa are absent from the semen of young boys and old men, and their absence from the semen of apparently healthy men is so frequent that, according to Kehrer,[1] sterility is in forty per cent of cases referable to azoospermia in the male, usually from epididymitis. Yet the great resistance of spermatozoa to chemical agents and decomposition makes it possible to identify them after many years of drying, Bayard[2] having detected them after six years, and Roussin[3] after eighteen years.

If a prolonged search for spermatozoa proves to be negative and the other features of the stain warrant a strong suspicion that it contains semen, corroborative evidence may be obtained by Florence's test.

Florence's Test for Semen.

This test is based on the formation of characteristic crystals of iodo-spermin when spermatic fluid is treated with an ice-cold iodine solution of the following composition:

> Iodine, 1.65 gm.; potassium iodide, 2.54 gm.
> Aqua dest., 30 c.c.

When a portion of a suspected stain is placed in the solution at low temperature, dark-brown crystals of idiospermin readily form which may be seen by the naked eye. Under the microscope the crystals first appear as fine needles, single or grouped in rosettes or pairs, but soon they grow to larger rhombic prisms

[1] Kehrer, Beitr. zur klin. Gynaekol., 1879, Bd. ii.

[2] Bayard, "Manuel Prat. de Méd. légale," T. ii., p. 6.

[3] Roussin, Annal. d'Hyg. publ., 1867, i., p. 152.

resembling hæmin crystals, which are soluble in water, alcohol, acids, and alkalies. Being soluble also in iodide of potassium, they may disappear from the specimen in a few hours.

Takayama[1] recommended the following reagent, with which he secured excellent crystals that remained intact for two weeks:

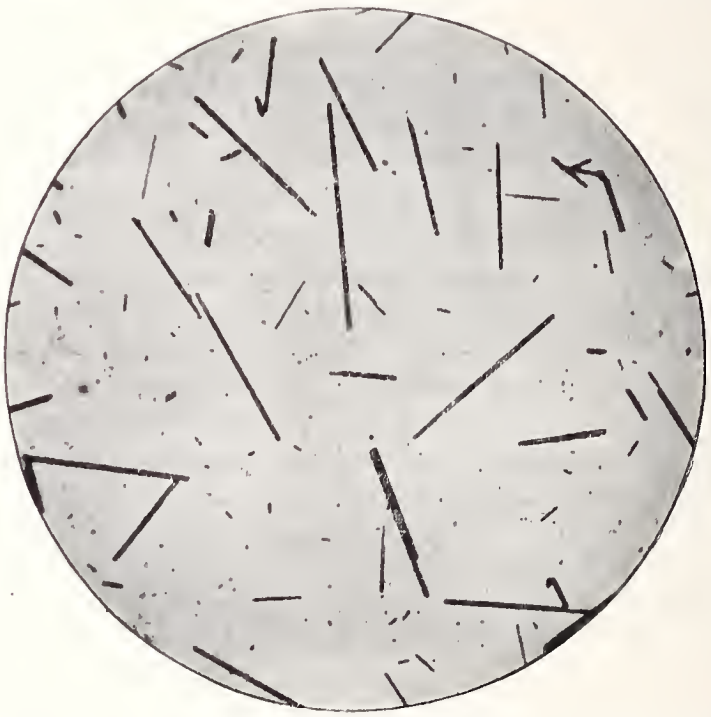


FIG. 36.—Florence Crystals from Human Semen. Prepared by adding to the extract from the seminal stain in 60-per-cent alcohol an equal part of a solution containing 2 per cent each of potassium iodate and iodide, acidulated with 5 per cent phosphoric acid, and cementing on the cover-glass with Japan varnish. Photographed the third day after preparation. × 175. (After Takayama).

Potassium iodate, 2 gm.; potassium iodide, 2 gm.; phosphoric acid, 5 gm.; aqua dest., 100 gm.

Florence regarded this test as specific of human semen, having failed to obtain it from other genito-urinary secretions or from other animal semen, but his claims have not been sustained.

Posner[2] obtained the crystals from a solution of pure spermin phosphate (Poehl), but not from piperazin, the isomere of spermin. Whitney[3] found the test always successful with semi-

[1] Takayama, Beitr. z. Tox. u. d. ger. Med., Stuttgart, 1905, p. 169.

[2] Posner, Berl. kl. Woch., 1897, p. 62.

[3] Whitney, Boston Med. and Surg. Jour., 1897, vol. cxxxvi., p. 329.

nal stains and negative with various secretions, and with the tissue of a leukæmic spleen containing Charcot-Leyden crystals, but he also obtained a reaction from rabbit semen. Richter[1] obtained the reaction from semen which contained no spermatozoa, but also from prostatic and vaginal secretions and other organic fluids containing lecithin, and concluded that the test is chiefly of value as excluding the presence of semen when the result is negative. Cruz,[2] however, as well as Richter, had negative results with some specimens of semen, and the former states that crystallization may be prevented by the presence of much urine, blood, or pus.

Florence's test must therefore be reserved for the preliminary examination of suspected stains, and a negative result held to indicate a strong probability that no semen is present.

[1] Richter, Wien. klin. Woch., 1897, p. 569.

[2] Cruz, Annal. d'Hyg. Publ., 1898, T. 39, p. 158.

THE

EXAMINATION OF HAIR

BY

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THE EXAMINATION OF HAIR.

GREAT importance attaches to the examination of hairs and fibres found upon weapons, in blood and other stains, upon the clothing or person of the victim or assailant in violent encounters, or upon objects in the vicinity of a criminal act, and the collection of evidence should never fail to include all the material of this sort that can be discovered. The peculiar importance of this class of evidence consists in the facts that human hair can usually be distinguished from that of all lower animals, that among the lower animals the hair is often extremely characteristic of the species, that the location of hairs can be fixed often with great accuracy, that their manner of extraction can be determined, that from the hairs the age of the individual may be estimated with some accuracy, and that animal hairs and vegetable fibres may be distinguished with certainty.

Numerous recorded cases collected by Taylor,[1] Tidy,[2] and Oesterlen[3] illustrate the great medico-legal importance of hairs. In many cases the discovery of hairs on weapons found far away from the locality and long after the date of a crime has demonstrated that these weapons were the ones employed in the acts. Robin[4] demonstrated that a man was not killed in the field where his body was found but in his house, by finding on the doorsill a few bloody hairs corresponding to those of the victim's head. Kolisko[5] found some bloody hairs of the scalp with attached epidermis in the handkerchief from the pocket of the assailant. Gallard[6] claimed a fœtal origin of hairs found on a linen cloth in which the victim had been strangled. Babcock[7] mentions that in the trial of Rubenstein for the murder of Sarah Alexan-

[1] Taylor, "Medical Jurisprudence," Philadelphia, 1892.

[2] Tidy, "Legal Medicine," Philadelphia, 1882.

[3] Oesterlen, Maschka, "Gerichtl. Med.," 1881, Bd. i., p. 511.

[4] Robin, Annal. d'Hyg. Publ., 1858, x., p. 434.

[5] Kolisko, Hoffmann's "Ger. Med.," 1902, p. 447.

[6] Gallard, Annal. d'Hyg. Publ., Third series, T. x., p. 371.

[7] Babcock, Hamilton's "System of Legal Med.," vol. i., p. 511.

der a fragment of cornhusk and a fibre of wool from a shawl worn by the girl found attached to a blood-spot on the boat of the defendant proved to be very important evidence.

In many cases false claims or probable but erroneous conclusions were set aside by the discovery that the hairs in question came from a lower animal, or were probably cut off and not torn out. The writer once found several human hairs torn from the scalp and mixed with blood upon the shoes of an assailant. The precipitin test not being applicable to this blood on account of the presence of tannin, these hairs served as evidence that the blood and the hairs came from the same source.

STRUCTURE AND GROWTH OF HAIR.

The hairs are flexible, elastic, horny threads corresponding anatomically with the horny layer of the epidermis. They consist of a *shaft* projecting beyond the skin, a *root* lying within the skin, a *bulb* which is the expanded end and is occupied by a structure of the corium called the hair *papilla*.

The root of the hair is enclosed in the hair *follicle*, consisting of the epithelial root sheaths and the connective-tissue sheaths, while sebaceous glands open into the upper part of the follicle, and a smooth muscle bundle, *erector pili*, is attached to the sheath beneath a sebaceous gland and near the bulb. Portions of any of these structures and even of contiguous fat adhere to the hair when forcibly extracted.

The shaft of the fully developed hair shows three strata: (1) cuticle, (2) cortex, (3) medulla. The cuticle consists of the imbricated scales which are non-nucleated horny epithelia. The size and character of these scales vary in different animals and in different regions of the same animal. Their free ends point to the tip of the hair, and each scale in the human hair covers about four-fifths of the underlying scale.

The cortex consists of densely packed fibres which are elongated horny epithelia with attenuated nuclei. Nearer the bulb the fibres become softer and rounder and the nuclei more voluminous. The medulla is absent in many fine human hairs, and when present does not extend throughout the entire hair shaft. It consists of a double row of granular cuboidal epithelial cells. Colored hairs contain pigment grains in the medulla and cortex

elaborated by the epithelial cells, and adult hairs contain numerous air vesicles in medulla and cortex which contribute to the opacity and affect the color.

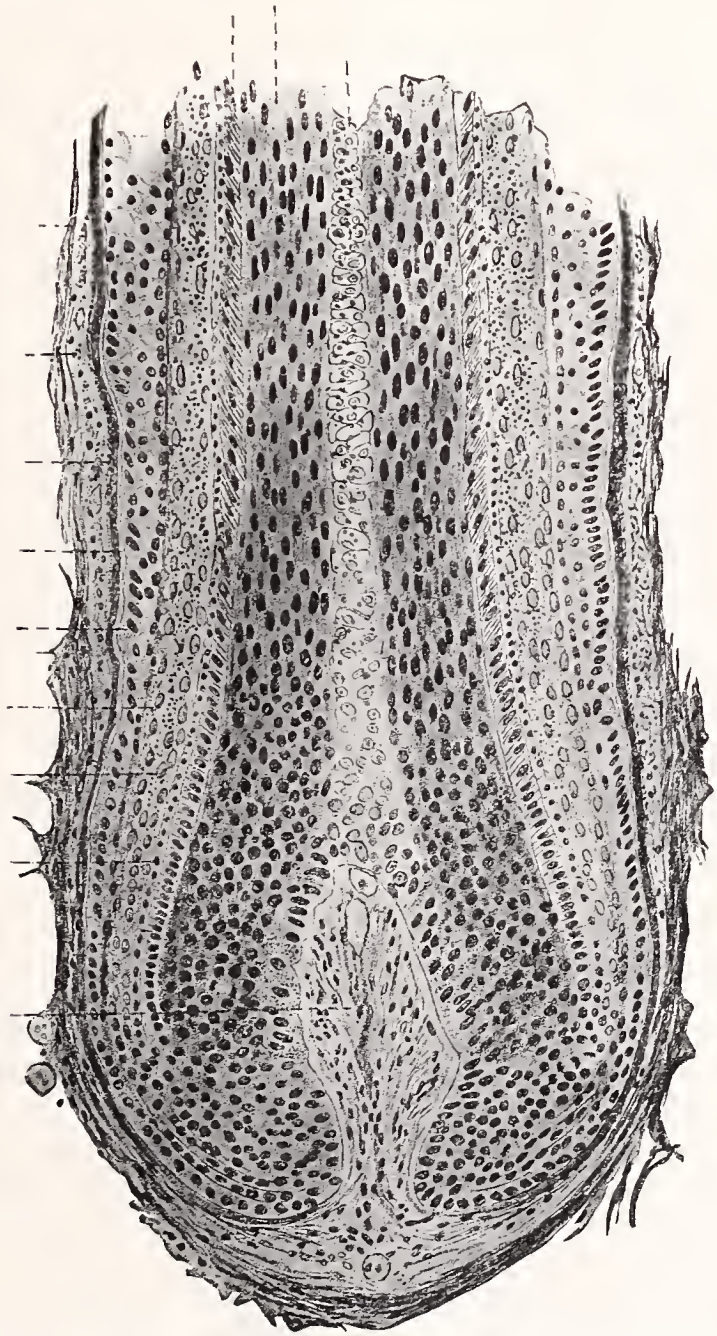


FIG. 37.—Longitudinal Section of the Lowest Division of the Root of the Hair. From a vertical section of the human scalp. (After Stohr.)

The number of hairs in a given area of the scalp varies in different races and individuals and at different ages in the same individual. Hilgendorf[1] counted in 1 sq. cm. 272 hairs in a German, 252 to 286 in a Japanese. Withof[2] found the hairs more numerous in blond than in dark subjects, and, in areas of $\frac{1}{4}$ square inch, counted 147 black, 162 brown, and 182 blond hairs. The grouping of the hairs in twos, threes, or fours is sometimes an individual characteristic and depends on the anatomical arrangement of the follicles.

The hairs are constantly being thrown off and replaced by new ones, those present at birth being rapidly replaced, while the life of the hair of the adult scalp is placed at 1,600 days (Stöhr[3]). In this shedding process the bulb becomes horny and rounded or frayed and displaced from the papilla, while the empty root sheath collapses. After a considerable period the epithelial cells of the root sheath begin to proliferate and form a new hair alongside of the old, which after a time falls out. Pincus[4] states that the rate of growth of the hair of the head during the first two years is from 2 to 5 mm. ($\frac{1}{12}$ to $\frac{1}{5}$ inch) in ten days. In authentic instances the hair has been known to grow long after death.

THE DISTINCTION BETWEEN LOWER ANIMAL AND HUMAN HAIRS.

In nearly all cases microscopical examination shows definite features of the cuticle, medulla, and cortex, which permit the certain differentiation of human hairs from those of the lower animals. The cuticle of human hairs is composed of very fine scales which project very slightly and can be detected only by careful focussing with a moderately high-power lens and often only after the edge of the hair has been cleared in strong sulphuric acid.

The cuticle of most animal hairs is composed of much larger scales which project prominently in step-like or wavy succession, yielding a very characteristic appearance, especially evident when any excess of pigment is dissolved in strong nitric acid. Even in very fine animal hairs these cuticular markings serve for

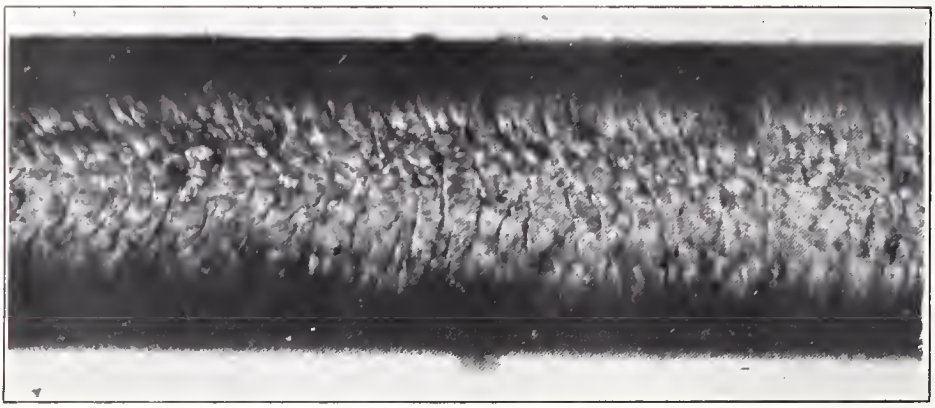
[1] Hilgendorf, cit. by Hamilton, "System of Legal Med.," 1900, vol. i., p. 196.

[2] Withof, *ibid.*

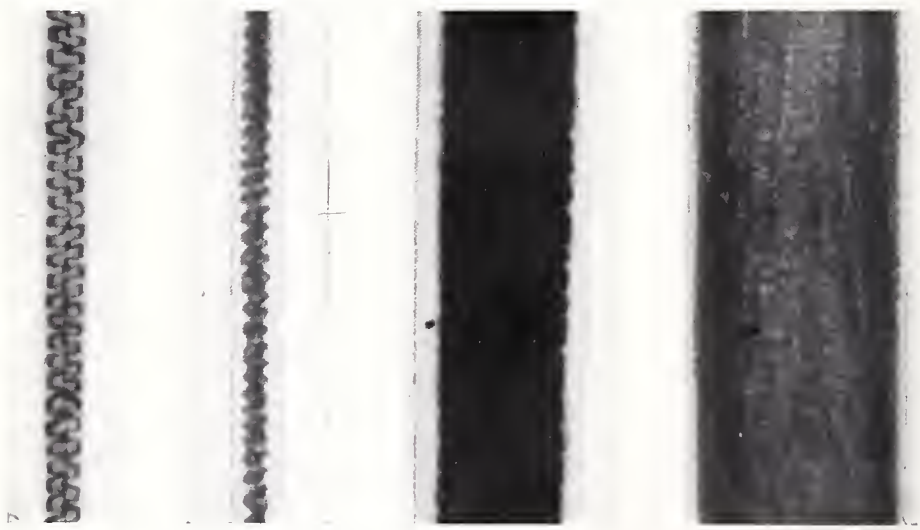
[3] Stöhr, "Text-book of Histology," 1906, p. 322.

[4] Pincus, Virchow's Archiv, 1866, Bd. xxxvii., p. 18.

2. 3. 4. 5.



1.



6. 7. 8. 9.

EXPLANATION OF PLATE X.

HAIRS.—1, Human; 2, cat; 3, dog; 4, calf; 5, sheep; 6, rabbit; 7, guinea-pig; 8, white rat; 9, white mouse. No. 1 is × 300, the others are × 150.

Photographed by Dr. Leopold Jaches.

identification. This character suffices for the identification of human hairs from the hair of the sheep, goat, horse, dog, cat, and cow. The tips of hairs from the hare, field-mouse, and mole show feathery projections of the cuticle.

The cortex and medulla of lower-animal hair differ even more strikingly from the human. The cortex of the human hair forms the bulk of the shaft while the medulla is always relatively narrow, and in the downy hairs and often in the fine hairs of the scalp the medulla is absent. In animal hairs the round or oval medullary cells are much more prominent and may usually be detected by a low magnification, and in most animals these cells occupy a wider zone than the cortex. Oesterlen's[1] table shows that in human hairs the cortex is usually four to ten times as broad as the medulla, while in the lower animals the cortex is seldom more than twice as broad as the medulla and is often reduced to a thin shell enclosing the medullary cells. The arrangement of the medullary cells is also characteristic. In the dog and cat the tips of the hairs show a single row of polygonal cells which increase in width as the hair broadens. In the hare and occasionally in the dog this row of cells may become double, while in the hare multiple spirally twisted rows yield a very peculiar appearance in the broader hairs. Even those hairs which most resemble human may still be recognized by the greater breadth of the medulla. Nevertheless, the medulla is entirely missing in some hairs or more often from some portion of the shaft in lower animals. Sharply marked areas of different color are found only in the hair-shafts of lower animals, and in dyed human hair.

When several hairs can be obtained for examination the above criteria are usually sufficient to warrant a positive opinion regarding their origin.

The exact measurements of the diameters of the hairs and their strata is often required and may be accomplished by the micrometer eye-piece. The following table of Oesterlen's gives the average diameters of the broadest portions of many hairs from different animals, and in different ages, sexes, and regions in man:

[1] Oesterlen, Maschka, "Ger. Med.," 1881, Bd. i., p. 511.

	Medulla.	Shaft.
Men.		
Top of head	0.006 mm. = 1-4233 in.	0.052 mm. = 1-488 in.
Crown	0.010 mm. = 1-2540 in.	0.053 mm. = 1-479 in.
Temple	0.014 mm. = 1-1814 in.	0.096 mm. = 1-264 in.
Forehead	0.012 mm. = 1-2117 in.	0.091 mm. = 1-279 in.
Eyelashes	0.004 mm. = 1-6350 in.	0.043 mm. = 1-591 in.
Eyebrows	0.010 mm. = 1-2540 in.	0.042 mm. = 1-604 in.
Mustache	0.032 mm. = 1-794 in.	0.123 mm. = 1-206 in.
Axilla	0.008 mm. = 1-3175 in.	0.079 mm. = 1-321 in.
Pubes	0.015 mm. = 1-1693 in.	0.099 mm. = 1-256 in.
Women.		
Top of head	0.007 mm. = 1-3629 in.	0.043 mm. = 1-591 in.
Crown	0.012 mm. = 1-2117 in.	0.081 mm. = 1-313 in.
Temple	0.013 mm. = 1-1953 in.	0.066 mm. = 1-385 in.
Forehead	0.008 mm. = 1-3175 in.	0.054 mm. = 1-470 in.
Eyelashes	0.011 mm. = 1-2309 in.	0.076 mm. = 1-334 in.
Eyebrows	0.014 mm. = 1-1814 in.	0.060 mm. = 1-423 in.
Axilla	0.015 mm. = 1-1693 in.	0.086 mm. = 1-295 in.
Pubes	0.012 mm. = 1-2117 in.	0.105 mm. = 1-241 in.
Old Man.		
Top of Head	0.012 mm. = 1-2117 in.	0.059 mm. = 1-430 in.
Crown	0.012 mm. = 1-2117 in.	0.067 mm. = 1-379 in.
Temple	0.014 mm. = 1-1814 in.	0.063 mm. = 1-403 in.
Forehead	0.011 mm. = 1-2309 in.	0.043 mm. = 1-591 in.
Boy—Aged 15 years.		
Top of head	0.012 mm. = 1-2117 in.	0.059 mm. = 1-430 in.
Nape of neck	0.010 mm. = 1-2540 in.	0.061 mm. = 1-416 in.
Crown	0.011 mm. = 1-2309 in.	0.055 mm. = 1-462 in.
Eyebrow	0.011 mm. = 1-2309 in.	0.053 mm. = 1-479 in.
Boy—Aged 1½ years.		
Forehead	0.009 mm. = 1-2822 in.	0.039 mm. = 1-651 in.
Boy— Aged 6 months.		
Crown	0.010 mm. = 1-2540 in.	0.046 mm. = 1-552 in.
Animals.		
Dog—belly	0.040 mm. = 1-635 in.	0.074 mm. = 1-343 in.
" back	0.048 mm. = 1-529 in.	0.069 mm. = 1-368 in.
White poodle	0.008 mm. = 1-3175 in.	0.025 mm. = 1-1016 in.
White horse—back	0.069 mm. = 1-368 in.	0.114 mm. = 1-223 in.
" " belly	0.036 mm. = 1-706 in.	0.083 mm. = 1-306 in.
Black horse—back	0.040 mm. = 1-635 in.	0.088 mm. = 1-288 in.
" " belly	0.034 mm. = 1-747 in.	0.057 mm. = 1-446 in.
Goat	0.045 mm. = 1-564 in.	0.065 mm. = 1-391 in.
Cow—belly	0.026 mm. = 1-976 in.	0.057 mm. = 1-446 in.
" back	0.026 mm. = 1-976 in.	0.038 mm. = 1-668 in.
Cat—back	0.057 mm. = 1-446 in.	0.075 mm. = 1-338 in.
" belly	0.010 mm. = 1-2540 in.	0.015 mm. = 1-1693 in.
Hare—back	0.048 mm. = 1-529 in.	0.053 mm. = 1-479 in.
" belly	0.046 mm. = 1-552 in.	0.055 mm. = 1-462 in.
Mole—fine	0.006 mm. = 1-4233 in.	0.008 mm. = 1-3175 in.
" coarse	0.018 mm. = 1-1411 in.	0.024 mm. = 1-1058 in.

CHARACTERS OF HAIRS IN DIFFERENT BODY REGIONS.

Variations in length, thickness, and form of human hairs are usually sufficient to indicate the location from which they have been derived; but when only a single specimen or a very few are at hand the conclusion will often remain uncertain.

The fine downy hairs of the general body surface can be readily identified by their fineness, shortness, and absence of medulla and pigment.

The length of the hair is alone sufficient to indicate the origin in the case of the head hair of females. Hairs of the beard and head may attain great length in males, but are seldom longer than 12 inches. The hairs of the pubes, axillæ, and chest are 1 to 3 inches in length; shorter hairs suggest an origin from the arms or legs; while the eyebrows, lashes, and nostrils present hairs $\frac{1}{4}$ to $\frac{1}{2}$ inch in length.

The diameter of the hair varies in different portions of the shaft, in different localities, and with the age and type of the individual. The thickest hairs are those of the beard.

Oesterlen found the average diameter of many hairs of the beard and other regions as follows: Chin, .125 mm. ($\frac{1}{203}$ inch); genitals, .121 mm. ($\frac{1}{210}$ inch); mustache, .115 mm. ($\frac{1}{221}$ inch); cheek, .104 mm. ($\frac{1}{244}$ inch); scrotum, .082 mm. ($\frac{1}{309}$ inch); eyebrow, .080 mm. ($\frac{1}{317}$ inch); eyelid, .076 mm. ($\frac{1}{334}$ inch); axilla, .077 mm. ($\frac{1}{330}$ inch); head hairs, .07 mm. ($\frac{1}{358}$ inch).

Yet it is commonly observed that in each region the diameters of the hairs vary greatly in different individuals, and even in the same individual. Oesterlen measured head hairs varying in thickness between .030 mm. and .117 mm. ($\frac{1}{847}$ and $\frac{1}{217}$ inch), pubic hairs from .064 to .153 mm. ($\frac{1}{397}$ to $\frac{1}{166}$ inch); and of the beard from .062 to .159 mm. ($\frac{1}{409}$ to $\frac{1}{160}$ inch).

The form of the hair shaft is circular in section if the hair is straight, as from the scalp and eyelashes, while the twisted curly hair of the pubes, beard, chest, axilla, and nares is oval or triangular or irregular on section.

The roots of hairs cleansed in strong alkali appear short and thick in the case of long body hairs; the short body hairs have a long thin root; while the roots of the beard and the head hairs lie between these extremes, being a little longer than broad. The ends of the hairs deserve attention.

The short hairs of the eyelashes and nares rapidly come to a point, while the larger hairs slowly diminish in diameter toward their tips, often becoming extremely minute for some distance. The short body hairs have rounded ends, sometimes split or thickened, owing to constant trauma and moisture.

Hairs from the scrotum, vulva, and axilla are constantly subjected to moisture and rubbing, they lose their cuticle, and their macerated shafts often show the splitting of fibres, giving the ends a brush-like appearance, or

FIG. 38.

FIG. 39.

FIG. 38.—Hair from Lower Part of Thigh, with Rounded Ends. × 7. (After Hofmann.)
FIG. 39.—Ends of Hair from Woman's Head. × 70. (After Hofmann.)

the rounded ends may become thickened and club-shaped from adherent detritus. Prolonged combing and brushing often split the ends of the hairs of women, and give them a characteristic appearance.

Freshly cut hairs exhibit a sharply cut edge with projecting cuticle and possibly some loosened fibres, but after one week the end becomes square, smooth, and rounded, but blunt. After twelve to fifteen weeks the end becomes elongated, but never to

the same extent as the original uncut end, and the medulla is always absent from such ends.

IDENTITY OF THE INDIVIDUAL FROM WHOM THE HAIRS ORIGINATE.

The attempt to demonstrate that certain hairs belong to a particular individual can seldom be successful, but in some cases a strong probability can be established regarding the age and sex of the subject, or a direct comparison may show that the hairs under examination are identical in appearance with those of a certain individual, although not necessarily belonging to him. In such an undertaking it is, of course, necessary that a considerable number of hairs be submitted for examination.

Age.

The head hair of the fœtus is more or less characteristic. Gallard was able to show that certain hairs probably came from a fœtus of 5 to 7 months. The average diameter was .024 mm. ($\frac{1}{1,058}$ inch) with variations between .012 and .040 mm. ($\frac{1}{2,117}$ and $\frac{1}{635}$ inch). He found that five new-born infants and four fœtuses of 7 to 9 months had hairs of about the same thickness (.028 to .0376 mm.) ($\frac{1}{907}$ to $\frac{1}{686}$ inch), 5-month fœtus .024 mm. ($\frac{1}{1,058}$ inch), and a 3-month fœtus .018 mm. ($\frac{1}{1,411}$ inch). The hairs in question were therefore thinner than those of a new-born infant, and thicker than those of a 3-month fœtus. The presence of downy body hairs may be of value in determining the age of the fœtus, since these hairs do not develop before the fifth month, while during the ninth and tenth month they fall out, except over the shoulders and thighs, and are found free in the amniotic fluid.

The head hair of children has usually no medulla. Oesterlen found the largest average diameter of the head hair of a 12-day infant was .024 mm. ($\frac{1}{1,058}$ inch); of one at 6 months, .037 mm. ($\frac{1}{668}$ inch); at 18 months, .038 mm. ($\frac{1}{686}$ inch); and at 15 years, .053 mm. ($\frac{1}{479}$ inch); while the average diameter in the adult is .071 mm. ($\frac{1}{358}$ inch).

The very limited value of such measurements is apparent, however, when one remembers that many infants are born without any but downy hairs on the head, and that the coarseness of

the hair at all periods of life is a very prominent individual and racial characteristic.

Sex.

The sole indication bearing upon sex to be derived from the hair is its great length in the female. Short hairs with fine natural points are constantly growing on the head in both sexes.

Race.

Certain distinct racial characteristics may be plainly visible in a small tuft of hair. The black curly hair of the negro is most distinctive, while the black stiff hair of the American Indian or the Mongolian is more difficult to distinguish from that of the Caucasian.

Color.

The color of the hair is one of the first features that attracts the attention in an individual, and may naturally prove of value in the identification of single hairs. The demonstration that the hair has been artificially altered in color by dyeing or bleaching may likewise be found very significant and may be accomplished by microscopical and chemical tests. Under the microscope the dyestuff is found uniformly distributed over the shaft, but not extending through it. The dye seldom affects every portion of the shaft, so that areas which have not been reached and still reflect the normal color are much more sharply marked than the natural gradation of color in normal hair. When some days have elapsed since the dyeing the new growth at the roots of the hair will be found unaltered in color.

The chief chemicals used in dyeing the hair contain salts of lead, bismuth, silver, or, rarely, nickel. The sulphides of these metals are produced by sulphur washes and may be removed by washing in dilute nitric acid and the solutions tested for the presence of metals. The hair is sometimes hastily blackened by a mixture of lampblack in oils, which may be removed by washing in xylol or ether. Red and brown tints are sometimes obtained by means of saffron and permanganate of potash.

Bleaching by peroxide of hydrogen is a trade-mark readily suspected in the gross, and leaves the hair unnaturally brittle,

while the pigment granules of bright yellow color are still visible under the microscope.

DETERMINATION OF THE MANNER OF EXTRACTION.

Hairs separated from the body may have fallen out naturally, or been torn out forcibly, or been cut off, and the microscopical study will often enable one to determine which event has occurred.

HAIRS THAT HAVE BEEN CUT OFF will show an absence of the roots, while the severed ends exhibit a more or less regular section. A sharp knife severs the hairs evenly and without splintering the ends, but Oesterlen found that a sharp knife used with a sawing motion in order to sever loose hair left many ends somewhat splintered.

A dull knife fractures some hairs, splinters the ends of many, produces several planes of section, and may pull out hairs which fail to yield promptly. The use of scissors may at times be detected in step-like planes of section.

HAIRS PULLED OUT FORCIBLY possess roots exhibiting hollowed ends in which lay the papillæ of the corium.

The Distinction Between Fallen and Forcibly Extracted Hairs.

In order to determine whether hairs have fallen out or have been pulled out one must have a considerable number for examination. In either case the hairs possess roots, but the appearance of the roots varies, in living hairs which could not, and in dead hairs which might, have fallen out.

If a firmly fastened living hair is extracted and cleared of the adherent scales, its root will be found hollowed out where it covered the papilla of the corium. If many such hairs in a group show such hollowed roots it is impossible that they could have fallen out. Old hairs still attached to the skin, but which have reached their full development, are gradually displaced from the papilla and sooner or later will fall out spontaneously. The ends of such hairs are rounded and solid. If a group of hairs all show such rounded ends they could not possibly have been pulled out since some living hairs must have been included with the others, but of a single such hair with rounded end it can

only be said that it may either have fallen out, or have been brushed out, or been pulled out forcibly. Recently extracted hairs, especially if living, very often show adherent red-cell detritus and large scales of epithelium.

EFFECTS OF HEAT.

Minakow[1] exposed hair to dry heat 120° to 150° C. for one hour without finding any gross or microscopical changes. At

FIG. 40.—*A*, Thickened End of Hair Shaft Burned by Flame. *B*, Distended air spaces in hair shaft at some distance from burned area. *C* and *D*, Air spaces in medulla of hair shaft scorched by curling iron. (After Minakow.)

180° C. the hair became reddened in 10 to 15 minutes, and curled owing to shrinkage of the outer layers of fibres. At 240° to 250° C. the hair became reddish or black and the medulla was distended with large vacuoles. Curling the hair with hot irons pro-

[1] Minakow, Vierteljahr. f. ger. Med., 1896, Bd. xii., Suppl. Heft, p. 105.

duced characteristic changes. The scorched areas of the shaft became reddish and opaque, while the medulla and sometimes the cortex exhibited groups of distended air spaces, and many fibres were split off from the shaft. The flame from pistol shots began to scorch the hair with characteristic changes at a distance of 20 cm., the effects rapidly increasing with closer proximity of the weapon.

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